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SPECIAL LIBRARIES

Official Journal of the Special Libraries Association

FEBRUARY 1956

VOLUME 47 NUMBER 2

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Issue

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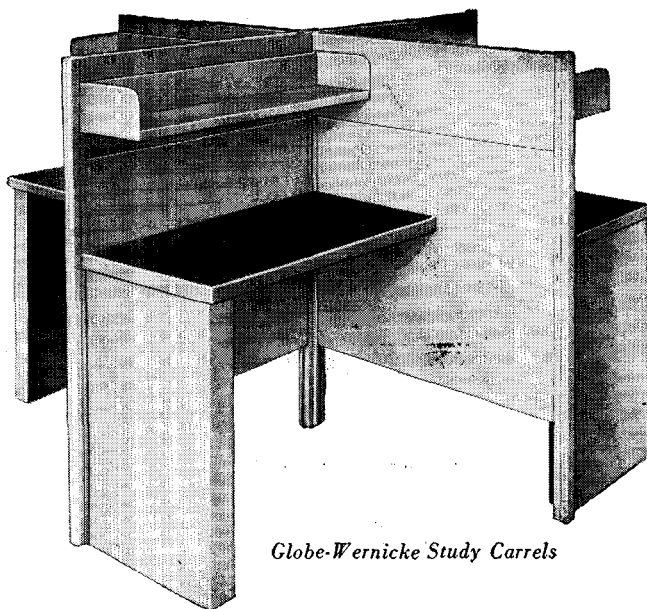
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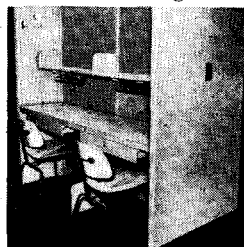
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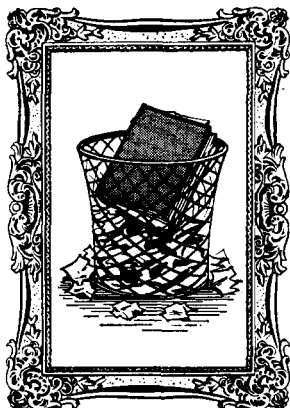
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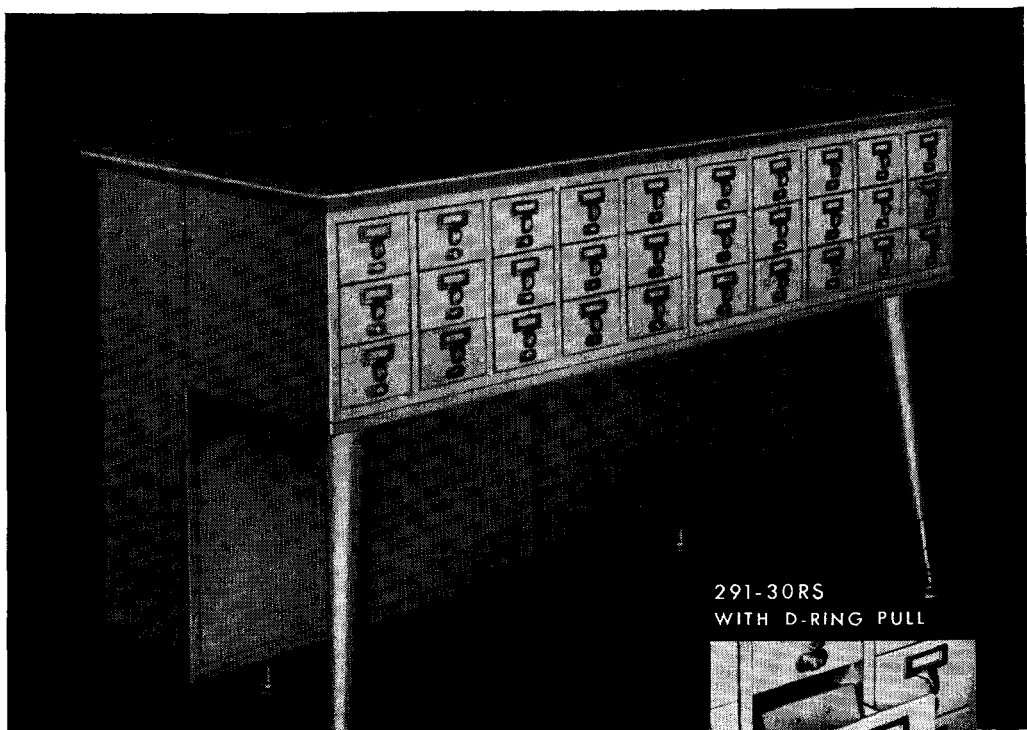
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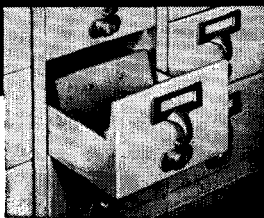
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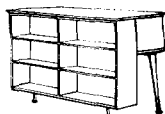


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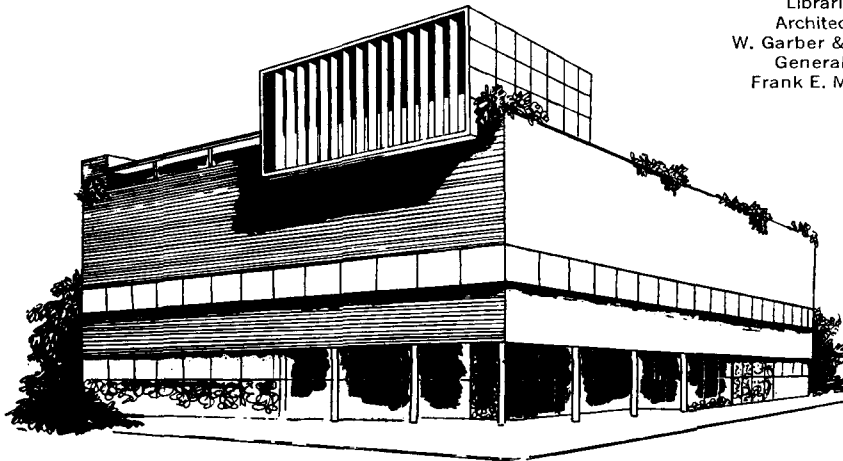
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SPECIAL LIBRARIES

Official Journal
Special Libraries Association

Volume 47, No. 2

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SLA'S PUBLISHING PROGRAM:

SPECIAL LIBRARIES

One of the measures of a professional society is its contribution to the literature of its field. Special Libraries Association makes its contribution through three serial publications and a program of nonperiodical publications. The serial publications are *SPECIAL LIBRARIES*, *TECHNICAL BOOK REVIEW INDEX*, and *TRANSLATION MONTHLY*. Of these, *SPECIAL LIBRARIES* has the largest circulation and is of general interest to special librarians. It is considered in some detail below. The other two serve specialized purposes. The nonperiodical publications will be discussed in the March issue of *SPECIAL LIBRARIES*.

Publishing is both an expense and a source of income. However, it should be kept in mind that the main purpose of SLA's publishing program is not to make money but to provide tools necessary for high professional achievement.

The Association's official journal is regarded throughout the library profession as one of the outstanding publications in the field. Financing it is one of the major problems of SLA's budgeting. However, there is general agreement that publishing *SPECIAL LIBRARIES* is one of our most important activities.

One of the major factors influencing the financial picture of *SPECIAL LIBRARIES* is that it is included without charge in the membership privileges of the majority of the members of the Association. At the end of 1954 almost 3800 copies of the journal were distributed to members. At the present subscription rate of \$7.00 a year, this represents income of \$26,600. However, the amount actually applied to *SPECIAL LIBRARIES* from the dues of these members was only \$1.60 a member in 1954. According to the budget this figure, which is based on the difference between the expenses and income of the journal, will be \$2.09 in 1956.

In addition to circulation to members, there were 700 subscribers at the end of 1954 bringing in actual income of about \$5,000. An additional source of income was the sale of advertising space which accounted for approximately \$7300.

Comparable figures for 1945 showed 2800 members receiving the magazine, 400 subscribers at \$2400, subscription rate of \$5.00, and cost of about 60 cents a member. Advertising income was \$5,300.

On the expense side, the greatest percentage increase since 1945 has been in editorial work. Until 1946 the editorial work was almost entirely contributed by Alma C. Mitchill as editor with the assistance of a member of her own library staff at Public Service Electric & Gas Company, Newark, New Jersey. In that year an editorial assistant was added to the staff at Headquarters to do the work previously done by Miss Mitchill's assistant. With Miss Mitchill's resignation as editor in 1951 it became necessary to replace her with a paid editor at a substantial salary. As a result, editorial expenses rose from \$500 in 1945 to \$5,750 in 1954, an increase of 1050 per cent. Few members are able or willing to devote the time that Miss Mitchill contributed for ten years to a voluntary project, nor are many companies as generous as hers.

The largest item in the *SPECIAL LIBRARIES* budget is for printing and it has increased in common with all printing costs. The quality of paper has been improved during this period so that pictures and advertising cuts can be accepted and the number of pages has been increased. Printing expenses rose from \$8,000 in 1945 to \$11,300 in 1954, an increase of 28 per cent.

Over this ten year period, therefore, SPECIAL LIBRARIES expenses have increased by 97 per cent while the increase in income has been only 77 per cent. In the 1956 budget the difference between income and expenses has risen to \$8,035 in spite of all the Finance Committee and the Executive Board were able to do to cut expenses.

There remains the possibility of increasing income. One of the particular aims of the present Committee on SPECIAL LIBRARIES is to increase income from advertising. However, SPECIAL LIBRARIES is not a commercial publication but a journal designed to assist special librarians in their work and to keep them informed of Association and professional activities. In addition, it must be remembered that thirteen and one half pages a year are devoted to exchange ads which enable SLA to advertise its publications in other library journals, and at least ten pages are devoted to advertising our own publications. Unless the proportion of advertising to text is greatly increased, it will be difficult to make advertising pay any larger part of the cost of copies distributed to members. Part of the cost of these copies will probably always have to be met from dues. Support of the only journal devoted entirely to the interests of special librarians seems a legitimate use of the members' money.

MRS. MARGARET H. FULLER, *Chairman*
Committee On SPECIAL LIBRARIES

MESSAGE FROM ADVISORY COUNCIL CHAIRMAN

In 1909, foreseeing the specialized needs of a large group of librarians, a group of farsighted individuals created the Special Libraries Association to provide for the librarian of tomorrow. The "tomorrow" of 1909 is today, and the Association created for tomorrow must face a new tomorrow. The increasing complexity of today's operations in business, government, and science is placing a heavy burden on the practicing special librarian. Some regard the burden as intolerable, others regard it as an opportunity for accomplishment.

An aggressive and foresighted association cannot be content with stopgap measures to meet each crisis as it develops. The Association must chart its course boldly and wisely so it can control to a maximum its own destiny.

Recently the Advisory Council was formally organized through the election of a chairman at the 1955 Fall Meeting of the Executive Board and Advisory Council. These moves have established strong additional resources for serving the SLA of today and preparing for the SLA of tomorrow.

It is proposed that three important steps are in order:

- (1) *Study*—research into the needs of the special librarian of tomorrow;
- (2) *Education*—sponsoring of seminars by leading library and documentation educators to provide special librarians with quick, effective, and profitable refresher courses or highly informative and helpful introductions into new methods and resources;
- (3) *Positive action*—leadership in undertaking new projects which will raise the technical and financial sights of the special librarian.

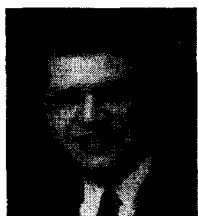
Bold steps have already been taken in the above directions. Bolder and more incisive steps will be required in the future. The Chairman of the Advisory Council will need determined and eager support and guidance by the members in grappling with the difficult problems and in uncovering opportunities for positive action to bring before our President and his Executive Board.

ALLEN KENT, *Chairman*
Advisory Council, 1955-56

AERONAUTICAL DOCUMENTATION PRACTICES IN EUROPE AND AMERICA

EUGENE B. JACKSON

*Chief, Division of Research Information, National Advisory Committee for
Aeronautics; Chairman, AGARD Documentation Committee*



E. B. Jackson

OVER TWO HUNDRED SLA members and guests from six foreign countries attended a "Review of Current Technical Documentation in Europe and America" at the Kresge-Hooker Scientific Library, Wayne University, Detroit, June 16, 1955. This meeting was a post-convention feature of the SLA 46th Annual Convention. It was under the joint sponsorship of the Science-Technology Division and the Documentation Committee, Advisory Group for Aeronautical Research and Development, North Atlantic Treaty Organization.*

Upon learning that AGARD would meet in Ottawa, Canada, during June 1955, the Sci-Tech Chairman, Margaret Hilligan, conceived the idea of the joint meeting. Cooperation was forthcoming from the concerned SLA and AGARD officials, Wayne University, and the invited speakers.

The morning session was intended mainly as a briefing of the European visitors on American documentation research. It was arranged by the chairman, W. Kenneth Lowry, Air Research and Development Command, Baltimore, who is the AGARD Documentation Committee's coordinator on documentation research. His speakers were Saul Herner, Atlantic Research Corporation; Calvin Mooers, Zator Company; James W. Perry, Western Reserve University; and William A. Wildhack, National Bureau of Standards. European research was represented by the paper "Information Theory" by R. A. Fairthorne, Royal Aircraft Establishment, Farnborough, England, that was read by R. G. Thorne. This paper was published in *SPECIAL LIBRARIES*, October 1955.

The afternoon session was intended to be a briefing of the domestic participants by European visitors on their national aeronautical documentation practices. The current issue contains those contributions on the situation in the Netherlands, France, Italy, and the United Kingdom. An article on American aeronautical documentation practices prepared by W. Kenneth Lowry rounds out the picture.

Some background remarks may be in order for orientation. European aeronautical documentation centers are more centralized and more authoritarian than American ones. Accordingly, it is not possible to cite exact parallels.

The Dutch National Luchtvaartlaboratorium (NLL) corresponds roughly to the NACA. Its documentation office is solely or largely responsible for Dutch aeronautical abstracting, aeronautical subject classification, international reports acquisition, research reports publication, translations, and the usual technical library services.

In France the Service de Documentation et d'Information Technique de l'Aéronautique (SDIT) combines the equivalent functions of the Armed Services Technical Information Agency (ASTIA) and the Office of Technical Services (OTS).

* AGARD was described by the writer before the Engineering Section, Sci-Tech Division, at the 45th Annual Convention, May 1954. Copies of an official AGARD informational brochure may be obtained upon request to him.

Similarly the British Ministry of Supply's Technical Information Bureau (TIB) is its country's ASTIA. It also leads Universal Decimal Classification (UDC) aeronautical subject classification efforts, participates in standardization activities, and distributes the research reports produced by the British aeronautical research laboratories.

As the AGARD Documentation Committee meets in Rome the week of February 20th at the Consiglio Nazionale delle Ricerche, we look forward to seeing at first hand the Italian facilities described in the final paper.

Researchers on supersonic airplanes and missiles look to the libraries and documentation centers for assistance. The following papers describe in general terms how several countries are meeting that challenge.

Aeronautical Documentation in THE NETHERLANDS

GERTRUDE SCHERPENHUIJSSEN ROM and DR. A. C. DE KOCK

National Luchtvaartlaboratorium, Amsterdam, The Netherlands

IN THE HISTORICAL atmosphere of trade and industry in The Netherlands, transportation has been and is still of the greatest importance. Next to modern shipbuilding, the possibilities of the airplane were recognized from the beginning. The name of Fokker became known during the First World War and until the Second World War, Fokker airplanes flew all over the world. Soon after the First World War, Plesman started a Dutch airline and at his death in December 1954, the KLM, Royal Dutch Airlines, was, in spite of the complete breakdown during the Second World War, one of the well-known leading airlines of the world.

Schiphol Airport with its technical service laboratories and the neighboring aircraft factory of Fokker is by day a city of about 13,000 people. The total number of people working in the aeronautical field in The Netherlands amounts to 20,000 or somewhat more, excluding the Air Force.

DEVELOPMENT OF RESEARCH

The military aeronautical research station, started during the First World

War, was soon afterwards transformed into an aeronautical establishment, Rijksstudiedienst voor de Luchtvaart (RSL), under the Ministry of Transport. In 1919 the first aeronautical reports were published. In 1921 the first volume of *Verslagen en Verhandelingen*, a series giving a survey of the activities of the RSL, later NLL, saw the light.

The Second World War, however, which stimulated aeronautical development to such an extent in the Anglo-American countries, arrested more Dutch activities. Forced to an undesired rest, the interest of scientists was drawn to documentation. They foresaw that after the war an avalanche of aeronautical literature could be expected, and preparations were made to enable them to absorb the enormous amount of literature which would become available.

CLASSIFICATION INDEX

As a good classification index was considered most important, in 1940 a Committee for the Classification of Aeronautical Literature (CCL) was established in which the most important aeronautical organizations collab-

orated—civil and military aviation authorities, the aircraft industry, and the aeronautical research groups.

The various aeronautical indexing systems so far in use were studied but were not satisfactory from the point of view of retrieval possibilities. It was decided, therefore, to create a new index based on current needs and requirements, and to investigate later whether the aeronautical chapters of the Universal Decimal Classification could be modified accordingly.*

This task was carried out from 1944 to 1948 by the mutual cooperation of a number of technical and scientific specialists. In 1950 and 1952 the index was revised and the third revision is still going on.

ABSTRACTING SERVICE

As a result of this cooperation, a collective abstracting service (CLD) was established. It is sponsored by organizations cooperating in the CCL: Netherlands Air Forces, KLM, Department of Civil Aviation, Royal Airplane Factories Fokker, and the National Aeronautical Research Institute (NLL).

The choice fell on a card abstracting service, like the ZWB card service before the war. This is furnished now to the sponsors and about fifteen subscribers, including the Technical Documentation Center for the Armed Services, the Aircraft Factories Aviolanda and Avio-Diepen, the Aviation Training School, the Aeronautical Department, Department of Applied Mechanics of the Technical University, Delft, the Governmental Mines, and others.

The abstracts are typed directly on paper-duplimats with an IBM electric typewriter and are printed by a Multigraph on perforated card-sheets. For the production of more than 12,000 cards a year, we need two abstracters and one and one-half typists.

* A survey of this development and of the index is given in *SPECIAL LIBRARIES*, January 1954, p. 27-28.

CATALOG OF AERODYNAMIC MEASUREMENT

The interest of scientists in documentation was awakened, and a new project in a more special field was initiated in 1950. A catalog of aerodynamic measurements was proposed.

The fundamental characteristic of the NLL Card Catalog of Aerodynamic Measurements (CAM) is that the very detailed scheme of classification on which it is based has been incorporated in the punched holes of hand-sorted, edge-punched cards. This method has been chosen because: (1) If properly applied, it permits simultaneous information retrieval according to numerous characteristics; (2) It can be adopted to mechanical and semi-mechanical means of sorting when the files have grown so large that hand-sorting becomes impractical.

The principal aim of the catalog is to collect all existing test data relevant to detail problems of aerodynamics. The edge-punched cards are capable of taking up the items of a very detailed schedule of classification and of allowing multiple selection according to various descriptions using only single cards, thus forming a card file of the utmost versatility and flexibility.

Two methods of coding are applied: direct coding and superimposed coding. With direct coding, where a one-to-one correspondence is established between holes and items, the number of items that can be coded naturally always equals the number of holes available. With superimposed coding more than one hole (e.g., two holes which are chosen at random) is used to indicate a single item, but the same holes, although not their combination, are used to code other items. In this way the number of items that can be coded is larger than the total number of holes. It has, however, the disadvantage that irrelevant cards are obtained.

By application of the rules of mathematical statistics, it has been determined that when sorting on one item of the superimposed coding about ten per cent of the total number of sorted cards are irrelevant. This, however, is estimated sufficiently low, since one usually has three or more items to sort for. With two items the number of irrelevant cards is reduced to one per cent on the average. Practical experience has confirmed these facts.

About 1200 cards are issued yearly which refer to practically all existing unclassified reports.

In order to enhance the usefulness of the catalog, NLL has taken several measures. An important one is that recently the catalog has been adapted to the use of Hollerith cards. Each card issued in the future will be provided with a list of Hollerith positions to be notched. The owner of the catalog then can make Hollerith cards himself if he has the use of a Hollerith installation.

The Documentation Panel of the Advisory Group for Aeronautical Research and Development recommend in September 1953 that all AGARD member countries should cooperate in giving this system a trial. The number of subscribers is thirty-three. The price of the cards is \$32.00. The catalog is issued on a nonprofit basis but the subscription rate can be lowered if the number of subscribers increases.

PUBLICATIONS EXCHANGE

For both the CAM and the CLD the securing of American publications is very important. The problems involved are manifold. They are partly solved by establishing exchange programs with aeronautical laboratories and institutes and partly by ordering reports from the Office of Technical Services. The first, however, is complicated by difficulties of distribution, even of unclassified contract reports, as the contracting agency often has to agree to the exchange. The second method is hampered

by the very high rate of the dollar that makes reports disproportionately expensive. Exchange is, therefore, preferable.

The third problem is the fact that organizations of aeronautical interest are spread all over the country, so that it is difficult to obtain a general view on institutes which produce material important to us. The fourth problem is a problem of time. Surface mail delivery over the Atlantic takes about a month, so that the delay between dispatch of order and receipt of report comes to a minimum of two months. In many cases a year has passed before receiving desired reports.

As for the availability of Dutch reports, NLL reports can be had by exchange, by subscription, or may be purchased per copy. A stock of prints on translucent paper is kept to provide copies when the printed reports are out of stock. Other Dutch reports can be ordered from the Netherlands Institute for Documentation and Registration (NIDER, Willem Witsenplein 6, The Hague), which will pass the order to the institute concerned.

NETHERLANDS INSTITUTE FOR DOCUMENTATION AND REGISTRATION

This brings up the more general aspects of documentation in Holland. In the NIDER is concentrated the Dutch effort in documentation. It is also the seat of the General Secretary of the International Federation of Documentation (FID) and of the Secretariat of the International Standardization Committee for Documentation.

It has a staff of about fifty people and in addition to its secretarial duties, it supplies any literature-information on request, as it is able to consult the patent office library in the same building. It is also the central report agency for industry. It has a documentation on documentation in which it registers efforts in documentation as far as they are known.

Aeronautical Documentation in FRANCE

G. H. FRENOT

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AFTER THE Liberation, French aeronautical research workers urgently needed exact information on foreign techniques, the growth of which had been so exceptional during the war. Documentation had, therefore, to be developed to its fullest extent, according to a carefully selected scheme, for the benefit of the entire French aeronautical community.

Only an official department, working in close cooperation with official bodies and private aeronautical organizations, could effectively contribute to the efforts of all and furnish the coordination so greatly needed.

PRINCIPLES OF THE SDIT

The French Air Ministry recognized the necessity for a central agency and established the *Service de Documentation et d'Information Technique de l'Aéronautique* (SDIT). It was set up to carry into effect a plan based upon the following principles:

1. The needs of all—wherever located or whatever the working conditions—must be satisfied. The documentary network had to be organized to give satisfaction not only to the engineers and technicians working near the central organization, but also to those living at a far distance. This required effective, efficient means of utilization, reproduction, and circulation.
2. In a scientific and technical field, such as aeronautics, the coordination of documentary activities is a sheer necessity. Coordination is essential to avoid duplication and to ensure that all shall benefit by everyone's work.
3. Documentation must be utilized to

satisfy the most varied requirements and must, therefore, progress from a simple bibliographical reference to the most detailed documentary study. This progression logically leads to a documentary sequence, the different phases of which are: bibliographical references, abstracts, full texts, and synthesis documentation.

Synthesis documentation is the natural result and culmination of documentary activities. All documentation referring to a single subject is collected together and used to the fullest possible extent. This implies translating foreign articles, classifying collected and prepared material, compiling and selecting to remove all extraneous data, and formulating conclusions or information learned.

Highly qualified personnel with a wide knowledge of scientific and technical matters are required for aeronautical synthesis documentary studies which must be made by specialists in each subject. Many documentary organizations publish synthesis studies which do not require as much specialization. The solution to this problem lies in complete cooperation between specialized engineers and technicians of official bodies and of industry and implies effective association and coordination.

FUNCTIONS OF THE SDIT

In accordance with the principles and purposes described above, the functions assumed by the SDIT are:

1. Searching for technical information on any subject bearing on aeronautics and developing necessary contacts with foreign countries.

2. Centralization of patent problems dealing with aeronautics.
3. Maintaining and developing a central library for published documents and a special library for unpublished documents.
4. Utilizing all documents received. This includes the publication and distribution of periodical bulletins for the benefit of research laboratories and interested aeronautical organizations.
5. Managing a translation section and coordinating all technical translations undertaken in the aeronautical field.
6. Compiling subject indexed cards, keeping up-to-date monographs on foreign aeronautical equipment, and preparing leaflets concerning this equipment.

7. Coordination, preparation, and distribution of documentary studies, with the help of official and private engineers and technicians.

8. Directing the reproduction and printing of pertinent documents by such means as microfilms, Photostats, enlargements, offset, letterpress, etc.

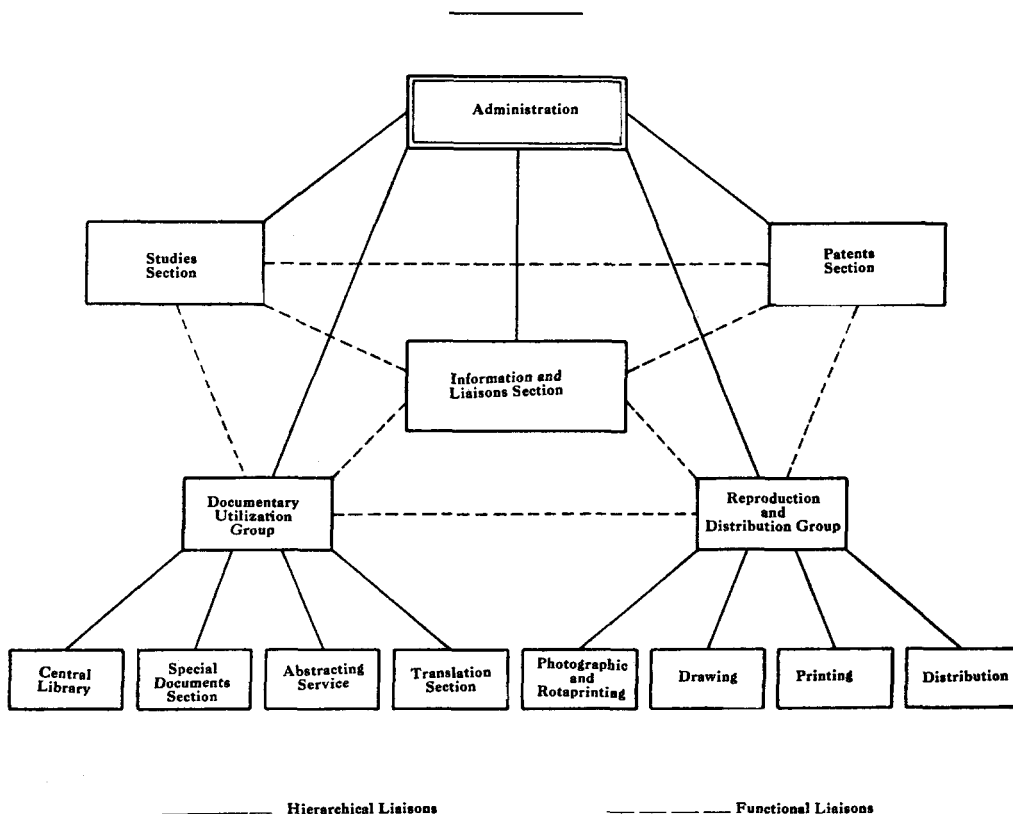
9. Maintaining and administrating a conference room and film library. The conference room is used as a theatre for projecting films and slides.

10. Ordering and distributing the regulations and official technical publications of the French Air Ministry.

ORGANIZATION OF THE SDIT

To fulfill these functions, the SDIT is organized, under the authority of a

Organizational Chart of the SDIT



director, into the following departments: assistant director and administration; patents section; information and liaisons section; studies section; documentary utilization group (central library, special documents section including a special library, abstracting section, and translation section); and a reproduction and distribution group (photographic and rotaprinting workshops, drawing office, printing office, and distribution section).

PATENTS SECTION

The patents section works for the benefit of the *Direction Technique et Industrielle de l'Aéronautique* of the French Air Ministry. It examines, selects, and reproduces patents deposited at the *Institut de la Propriété Industrielle*. These patents are made available to State qualified engineers, subject to the conditions laid down by the *Instruction Ministérielle* of November 8, 1944. Notifications of any decisions concerning releases or restrictions of the *Instruction Ministérielle* are handled by the division.

The section maintains permanent contact with the *Institut de la Propriété Industrielle* and other organizations specializing in the patent field. It also acts as a center for problems concerning patents submitted in the name of the State on matters pertaining to aeronautics.

The patents section has files which now amount to 49,500 card-indexed patents. It examines annually 25,000 new patents, eleven per cent of which, on the average, are submitted to official qualified technicians for surveying.

CENTRAL LIBRARY

The central library is restricted to State engineers and technicians and to specially authorized persons from private aeronautical industry. All library users must fill in and sign a special registration form. The library can re-

lease documents on loan for a limited period, a maximum of fifteen days, except in special circumstances.

The library holds scientific and technical information on aeronautics consisting of: French and foreign periodicals and certain restricted documents; scientific and technical books, reports, and notes; regulations, industrial standards, specifications; published information on aeronautical equipment; scientific and technical translations; administrative documents; encyclopedias, dictionaries, and tables; and miscellaneous documents of a general nature.

At the present time the central library contains more than 250,000 documents. It subscribes to 2,100 French and foreign periodicals and receives 7,000 French and foreign technical publications monthly. Annually, there are 20,000 visitors and 80,000 loans. Cards indexed references number 247,000. The library also possesses an important collection of microfilms which now represents more than 73,000 documents.

SPECIAL DOCUMENTS SECTION

This section receives all unpublished documents forwarded to the SDIT, including those of a secret or confidential nature. A *Special Monthly Bulletin* gives abstracts of every scientific and technical problem dealt with in these documents, which are systematically recorded and classified. The section possesses files in which are kept up-to-date references to published and unpublished documents received by the SDIT, excluding published specifications and books. Special files contain synthesis cards classified under key words so that the documentation referring to any scientific or technical subject, idea, or group of ideas can be retrieved.

Access to this section is strictly limited to authorized engineers or technicians who have completed and signed a special agreement form bearing the stamp of the authority to which they are responsible. These clients are under the

control of the Military Security Office. Authorized clients may consult documents in the consultation room and borrow them for fifteen days, in principle, except in special circumstances.

The personnel of the section know foreign languages. They are constantly available to give information or compile bibliographies for clients.

The section writes to French attachés abroad when it requires information or documents it does not possess in its files. The special library contains 50,000 unpublished documents. Its files contain 100,000 subject indexed cards and 350,000 references. Its microfilm collection represents 1,000 documents.

ABSTRACTING SECTION

This section examines systematically the periodicals received by the SDIT and compiles the *Monthly Bulletin* which contains all references pertaining to relevant articles. Articles which are considered most important have a special reference. If a translation of a foreign article exists or has been undertaken, this is also indicated. The layout adopted for abstracts enables the specialized reader to find quickly the subject in which he is interested.

The *Monthly Bulletin*, restricted in circulation, is supplemented by the periodical *Docaero*, as well as by successive editions of the *SDIT Classification*. These supplements are sent free of charge to every subscriber to the *Monthly Bulletin*. The section has already compiled more than 95,000 abstracts, which may be found in 116 bulletins.

STUDIES SECTION

The studies section has already compiled and distributed 664 synthesis studies or similar works for the benefit of the engineers and technicians of industry. *Docaero* is produced by the section with the cooperation of qualified engineers of official departments and industry. Special studies may be issued

separately on particular subjects. They are compiled by engineers or technicians belonging to SDIT or by specialists of government offices or industry.

TRANSLATION SECTION

This section receives requests for translations from the air departments, excluding translations dealing with aeronautical equipment of foreign origin used in France. Moreover, it undertakes to prevent scattering of efforts or duplication of work and the coordination of all scientific and technical translations bearing on aeronautics. At the end of each week, the SDIT sends to members of the translation coordination pool a list of the translations in preparation, which have been brought to its notice during the week, including those it has itself undertaken. The translations completed and circulated during one month appear in the *Monthly Bulletin* published the following month.

The section has already made 3,470 translations which represent more than 110,000 pages of text. Distribution amounts to 90,000 copies. The section has also translated 2,360 notices or equipment leaflets referring to foreign aeronautical equipment. As for the coordination of aeronautical translations assumed by the SDIT, 410 weekly lists of undertaken translations have been circulated, and files containing 35,000 references are constantly kept up to date. This action has prevented duplication in about seventy-five per cent of cases.

REPRODUCTION AND DISTRIBUTION GROUP

The reproduction workshops of the SDIT possess the materials and machines necessary for every type of work. They annually make 20,000,000 printings; 1,600,000 offsets; 300,000 letterpress printings; 55,000 drawings and reproductions; 260,000 microfilms; and 125,000 Photostats and photographic enlargements.

The distribution section is responsible for the distribution of more than 115,000 pieces, representing a value of about forty million francs.

The film library contains 260,000 metres of 35mm film and 152,000 metres of 16mm film.

EXCHANGE OF AMERICAN AND FRENCH PUBLICATIONS

The SDIT gives instructions to the French Air Attaché, its representative for documentation in the United States, concerning the purchase of technical documents and specifications and subscriptions to aeronautical publications.

In addition, the SDIT has organized an exchange agreement for aeronautical documentation with many American organizations, including the National Advisory Committee for Aeronautics (NACA), Library of Congress, National Bureau of Standards, California Institute of Technology, Air Force Headquarters, Cornell Aeronautical Laboratory, Institute of Aeronautical Sciences, American Mathematical Society, United Aircraft Corporation, Princeton University, Department of Commerce, Franklin Institute, Johns Hopkins University, Massachusetts Institute of Technology, Rennselaer Polytechnic Institute, University of Kentucky, and many others. These American organizations send their own publications to SDIT and in return receive SDIT publications. Thus SDIT receives technical notes, research memoranda, technical memoranda, and technical reports from the NACA.

Since 1953, as the result of an agreement between Mr. Dexter, Institute of Aeronautical Sciences, and Mr. Frenot, SDIT delegate to the AGARD Documentation Committee, SDIT receives pre-prints from the *Journal of Aeronautical Sciences* and from *Aeronautical Engineering Review* one month before normal circulation.

Generally speaking, SDIT thinks that

the present situation is satisfactory and presumes that American organizations with which it has exchange agreements feel the same. SDIT is ready to discuss the possibility of an exchange agreement with any other organization, for it is always interested in setting up new agreements of such a nature.

COOPERATION BETWEEN THE SDIT AND OFFICIAL AND PRIVATE AERONAUTICAL ORGANIZATIONS

SDIT representatives are constantly in contact with the representatives of official aeronautical departments as well as with those of aeronautical firms. Each department or firm has built up a documentation bureau that provides a liaison with the SDIT.

The members of these bureaus give information to the engineers of their staffs from their own files. If they need further or more complete information, they either call or write the appropriate SDIT sections. As the SDIT keeps more varied and complete up-to-date files than any other French aeronautical organization, it is able to provide others with information that makes it easier to compile documentary studies on a given subject, or that helps with research on particular scientific or technical matters. In addition, since the SDIT staff remains in close touch with French attachés, it may provide, if necessary, SDIT clients with documents or information from abroad.

Due to their contacts with official and private documentalists, SDIT is kept informed of the trends of researches. This enables them to modify their own activities according to the development of new techniques.

As for translations, the official and private documentation bureaus call, when necessary, the SDIT translation coordination bureau to find out whether a translation has already been undertaken. On the other hand, they inform SDIT about their translation activities.

French builders and official departments have adopted the SDIT classification as well as its documentary methods. This has permitted, in many cases, the saving of money by avoiding duplicate studies on important subjects.

INTERNATIONAL COOPERATION

On the occasion of the visit of the Documentation Mission of the Organization for European Economic Cooperation to the SDIT in October 1951, Ingénieur Général Rouanet, Director of the SDIT, pointed out that coordination of aeronautical activities was highly desirable on an international level. He added that SDIT, for its part, was ready to cooperate with any international organization coordinating these activities. This was, in his opinion, of

the greatest importance, particularly in view of the extremely rapid extension of sciences and techniques.

At present SDIT participates in the coordinating activities sponsored by the AGARD Documentation Committee to which are applied, under Professor Von Karman's and Sir Arnold Hall's leadership, the principles of international cooperation.

When participating in the work of the committee, the SDIT representative, as well as other French aeronautical organization members of the Committee, enjoys working in accordance with principles already adopted in France on the national level and cooperating, for the benefit of the NATO countries, in the task undertaken by AGARD on the international level.

The Technical Information Bureau of the BRITISH MINISTRY OF SUPPLY

A. H. HOLLOWAY

Technical Information Bureau, Ministry of Supply, London

THE QUANTITY of scientific and technical research and development which is carried out in the United Kingdom, although perhaps not great by the standards prevailing in the United States, is none the less very considerable and greater than that in any other country of the western world. It is my purpose to describe how the Information Bureau of the British Ministry of Supply fits into the picture of this R and D work, as I shall call it, and I will try to discuss this, as far as possible, from the point of view of the American observer.

DIVISION OF R AND D WORK

We must divide up the field into convenient parts, although this is not easy

and there is a good deal of overlapping between the several pieces. The process, however, is necessary if one is to obtain a clear picture. First, there is a division between the work being done by or for the government, and that being done privately, principally by large firms, but also in the universities, independent research organizations, and the like. We can say comparatively little about private research because, although that done in universities is openly published, the firms which spend their money in this way usually prefer to keep the results to themselves rather than to publish them for possible use by their rivals.

The government work we can divide into that done for military purposes and that done for civil purposes.

It is profitless to compare the bulk of the two classes, but it may be helpful to say that most of the latter centers round the Department of Scientific and Industrial Research. The DSIR not only maintains a number of laboratories itself, of which the best known is the National Physical Laboratory, but it also contributes to the running of many research associations which specialize in particular lines of work. The great majority of the work done in the DSIR stations is openly published, but because the research associations depend partly for their finances upon the contributions of the industries that they serve, much of their work is not available to all who would like to have it.

The military R and D work is in its turn divided into that done by or for the Admiralty and that done by or for the Ministry of Supply which serves all three military services, but principally the Army and the Royal Air Force. There is liaison between these parts so that duplication is reduced to a minimum, but they all are in fact quite separate.

In using the phrase "by or for" I should say that although some R and D work is put out to contract, the proportion is, I believe, much less than in the United States. The tendency is for the more general work to be done in government establishments while that directed towards the development and production of particular stores is more likely to be put out to contract. As in the United States, it is common for contractors in these cases to retain certain rights in the use of information arising from their contracts.

MINISTRY OF SUPPLY

The Ministry of Supply maintains a number of experimental establishments where work is done varying from fundamental research work, which forms the scientific capital for application as may be necessary to some project, to testing

of equipment which is being produced in bulk. The work of these establishments is written up in reports, which vary from a sheet of *ad hoc* notes on some specific job to surveys of quite a broad range of work, which may run to hundreds of pages.

The Technical Information Bureau (TIB) with its sister, the Central Radio Bureau (CRB), has as its primary function the handling of R and D reports for the benefit of the Ministry and its collaborators at home and abroad. The CRB, as its name implies, deals with electronic subjects while the TIB covers all others. Both the bureaus are concerned essentially with unpublished information, although each also has an interest in published material. Published books and periodicals, however, are mainly dealt with by the libraries at the Ministry headquarters and at its other establishments.

SUPPLYING AND OBTAINING REPORTS

The information bureaus then have the task of obtaining reports of unpublished technical information: cataloging, indexing and announcing them, and supplying them to authorized users. This traffic is two-way, for the bureaus, on the one hand, receive the Ministry's reports and supply them to those outside the Ministry who are entitled to receive them and, on the other hand, acquire reports from all possible sources and see that all the Ministry's officers who have need of their contents have access to them. Thus, the bureaus are not only the sole source from which overseas users obtain Ministry of Supply reports but are also the collecting agencies for external reports.

This makes the position sound much too easy. It is useless for an American individual to write to TIB for a Ministry of Supply report. There are channels and, irritating though they may be in many cases, in the long run it is to everyone's advantage to use

them. These channels closely parallel the United States domestic channels.

An individual or agency needing one of our reports must apply to the government agency for which he is working or which may be interested in his work, for the report or reports which he wants, stating as usual the reason for which they are needed. The government agency, if it approves the request, will arrange for it to be forwarded through recognized channels to TIB, which sends back the required material (provided that it is still available) through the same channels. In the reverse direction TIB would be very unlikely to refuse any technical report from any source, but the normal channel is through the British Joint Services Mission (BJSM) in Washington, which asks appropriate U. S. government agencies for what is required.

It should not be supposed that the trade in reports is entirely conducted through requests. A number of copies of practically all the Ministry of Supply reports are supplied automatically and unasked for to the United States agency in London which is responsible for their collection, and some American reports are received without specific request by BJSM. It is unfortunate that neither the proportion of different American reports so received nor the number of copies supplied is as high as we should like and that not as many United States reports are released automatically as are by the Ministry of Supply.

METHODS OF HANDLING REPORTS

American reports are identified by accession numbers and the British reports by their series, which are fewer and usually longer than American series. All reports are abstracted if they do not already contain a useful abstract and are indexed under subject, title, and individual and corporate author.

We use for the most part the Universal Decimal Classification (UDC) system of subject classification, a development of the familiar Dewey system which gives much greater detail. In the United Kingdom classification systems are in general use and UDC is the most common, in contrast to the general use of alphabetical systems in the United States.

Of course, all classification systems that deal with subjects undergoing rapid development, as is the case with almost all our material, need constant overhauling to keep abreast of the times, and variations of recognized systems are used for special purposes. I should mention that we are very interested in subject classification and development of new techniques.

Reports are circulated to those units known to be interested in their contents and these units are, incidentally, asked to suggest further recipients. For the benefit of those whose needs are not known, lists with abstracts are widely distributed within the technical departments of the Ministry to give all an opportunity to send in requests.

REPRODUCTION OF DOCUMENTS

There are only single copies of many external reports although many officers may have an essential interest in their contents. Unfortunately the bureaux have no reproduction facilities of their own and they have to rely upon a central photocopying service whose resources are so limited that irritation is often caused, not only by reports being out of reach when urgently required but also by the impracticability in many cases of obtaining the numbers of copies really necessary for efficient use.

Microreproductions are used for some purposes—not only microfilm but also microcards and microfiches. The information bureaux have facilities for using all these, and all the establishments

have microfilm readers though not many have microcard readers as yet.

Microfilm is the least popular of these three forms of microreproduction, and microfiches are considered to be the most valuable. These are essentially similar to microcards on transparent film, and, while they obviously cannot have an abstract readable by the unaided eye on the back, they do have the essential bibliographic information in large type on the front. Microfiches have two great advantages: first, they are used with a much simpler and cheaper reader than microcards (and one which gives a much brighter and clearer image); and second, it is not difficult to produce full-size paper copies of documents from microfiches, a procedure that is impracticable with microcards.

OTHER ACTIVITIES OF TIB

Thus far we have spoken solely of unpublished information but there is also a good deal of interest in the published information in some fields, particularly those concerned with aeronautics. *Index Aeronauticus* is an abstract bulletin which covers not only strictly aeronautical subjects, such as aerodynamics, but also a number of other topics associated in one way or another. Some of these subjects are already covered by abstract bulletins but others are not, and thus *Index Aeronauticus* fulfills a need which is not otherwise catered to it.

It is distributed quite widely, about one hundred copies coming to the United States, and we hope that it may be possible to put it on public sale. The published information which forms the raw material is obtained by purchase, by gift, and by exchange. I would suggest that any agency that wishes to obtain *Index Aeronauticus* and has something to offer in exchange, get in touch with the British Joint Services Mission in Washington, D. C.

A number of the reports we obtain are in unfamiliar languages, and we therefore have a translating section which copes with all the usual European languages and some others as well. Translations of any general interest are reproduced, and copies are supplied to a number of agencies that are interested in exchange arrangements. We also cooperate with translation indexes, such as that maintained by the Association of Special Libraries and Information Bureaus (Aslib), and the existence of a number of translations is announced in *Index Aeronauticus*.

Another of these rather marginal activities is motion picture films. TIB operates a cinema at one of the headquarters buildings and also holds a number of films on subjects of interest to the Ministry. A large proportion of these are German R and D films captured at the end of the last war while others are commercially available. Still others are produced for special purposes either in the Ministry or outside. It should be explained that the information bureaux are not producers of films any more than they are important producers of reports; they are, in fact, in the main handling agencies which supply copies of the material with which they deal and information about it.

A subject of more limited interest is that of the specifications to which stores are ordered. These are very numerous and sometimes rather confusing. TIB is the clearing house for an exchange scheme for British and United States specifications relevant to aircraft—the scheme is, of course, on a government to government basis.

APPROACH AND METHOD DIFFERENCES

Within its own sphere TIB has a considerable measure of expertise, and members of its staff act on specialist documentation committees and similar advisory bodies. We represent a point of view which is in some respects dif-

ferent from the American, and although we are seeking the same ends, we often tend to follow different paths. For example, I would say that in the United Kingdom there is much less mechanization than in the United States, and that we tend to rely upon the personal skill of our information officers more than I believe is usual here. I would

not venture to suggest which method is the better, even if there is a straightforward answer to this question, but I am sure that each line has its own advantages. I personally believe that excellent results may be obtained by a judicious combination of our different approaches and by the increase of liaison and exchange of views between us.

The Present Condition of Air Force Information Services in ITALY

T. COL. BRUNO GARIMBERTI

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ITALY EMERGED from the Second World War with widespread damage and national poverty. The conditions of both military and civil aviation were critical and in the succeeding years, owing to the limitations imposed by the peace treaty and to meagre financial resources, it has been impossible to pursue any policy for the improvement of these conditions.

Moreover, this period has witnessed the loss of many technicians of all grades in this field of activity. The critical problem of redistribution of personnel has continually harassed the aeronautical industry and it cannot be said that it has yet been solved.

Under these conditions, it has been impossible to find an easy road to a reasonable settlement, and the specific problem of Air Force Information Services in Italy has become increasingly evident. The participation of Italy in NATO and her consequent participation in the work of AGARD has certainly shed more light on the problem but has not yet shown any possible means of an immediate solution.

Several associations, both public and private, are at present contributing to the supplying of technical and scientific information, and it is worthwhile outlining the principal features of these associations. The most important is the National Scientific and Technical Information Center (CNDST—*Centro Nazionale di Documentazione Scientifico-Tecnica*) which operates in the nucleus of the National Research Council (CNR—*Consiglio Nazionale delle Ricerche*). The Italian Air Force has established a liaison office at this center.

NATIONAL SCIENTIFIC AND TECHNICAL INFORMATION CENTER

The National Technical Information Center was established on January 6, 1938. This organization, created to replace all previously existing centers which dated back to 1912, has assumed the activities of the earlier organizations and all their documents.

The duties of the Center are:

1. To institute a service to supply information regarding engineering and

industry for scholars, industrialists, and all who require such information;

2. To supervise the publication of an international bibliography on engineering and industry—that is, the publication of a periodical review of international movements in these two fields.

In 1950 the Center, which had in the meantime taken the name of the National Scientific and Technical Information Center, undertook a complete reorganization with the aim of reaching maximum efficiency in the functions of the Center. To put its program into effect, the Center at present carries on a number of activities.

BIBLIOGRAPHICAL AND DOCUMENTATION SERVICE

One of the primary functions of the Center is a simple or analytical bibliographical information service. This service, which uses a card index filing system, includes bibliographical data and analytical resumes of thousands of pertinent interesting works on general and specific subjects. They are taken from scientific and technical fields, with reference to both native and foreign trends from 1900 to the present day.

This general aid program, which the Center extends to those interested in scientific research and industrial progress, is constantly being improved and brought up to date so that it can furnish, whenever possible, complete and current information on the subjects and problems in which various groups of subscribers are interested.

The index cards, which adhere to international library standards, are classified according to the Universal Decimal Classification system. The CNDST index cards, to date, number more than one million and are increased every month by about 15,000 entries. A plan is being studied whereby more entries and better service—including informa-

tion from all scientific and technical sources, both national and foreign—can be included in the Center's service.

SCIENTIFIC AND TECHNICAL PUBLICATIONS INDEX

Another of the Center's activities is the editing a monthly *Scientific and Technical Publications Index* magazine (*Indice di Periodici Scientifici e Tecnici*) which enables scholars to be currently informed on the Italian and foreign scientific-technical papers that are published in the magazines which reach the Library of the CNR. Through this service scholars are made aware of up-to-date trends and are supplied with all essential bibliographical data.

The number of Italian and foreign periodicals now handled is 2,000. More than 10,000 items of information are extracted monthly, forming annually about 120,000 items of information.

Since 1952, new periodicals have been added, among them a noticeable number of Russian magazines, with extracts from the articles translated into Italian. This results in the supply of fuller information and the obvious possibility of improved orientation and documentation of study and research.

The *Index* has been divided, since 1953, into fourteen sections representing the various branches of scientific and technical study. A further division into additional sections is envisaged for those subjects which are more widely written about. Such a subdivision, already in effect for medicine and engineering, could be extended in the future to other subjects.

A particular system of compiling the *Index*, which can supply a card summary for anyone, has been adopted for the supplying of a general or particular card index on subjects which are relevant to an individual's own private study or research. An index of authors

for the year 1951 is being compiled, and a systematic index is under study. It is designed to make the periodical a constantly improved biographical vehicle in scientific-technical work.

PHOTOSTATIC AND GRAPHIC COPY SERVICES

One of the most important information activities which the Center pursues is the supplying of copying service. The photostatic service today constitutes a most useful aid to research and assists in the diffusion of technical documents. It is certainly widely used by research workers, by scientific and technical associations, and by both Italian and foreign subscribers in general.

The Center can supply photostatic copies, in microfilm and on paper, of translations from any language and analyses in *précis* form.

In 1951 the Research Council began the construction of a large new laboratory with three special departments: one for photostatic copying on graphostat paper, another for photostatic copying on microfilm, and a third for the developing and printing of all photographed material. This laboratory, which has been properly furnished with the most modern equipment needed for this type of work, is continually being improved and brought up to date.

At the same time, a reorganization of the special Research Section (*Sezione Ricerca*) was begun to streamline its system and render more efficient its facilities for work and research for the benefit of all subscribers. To accelerate the supply of microfilm and photostatic paper copies from books and magazines not in the possession of the CNR Library, regular exchange systems were set up with the most important Italian and foreign information associations in France, Germany, England, Switzerland, Spain, Portugal, the United States,

Peru, Japan, Brazil, Sweden, Norway, Hungary, and other countries.

Thus the field of documentary research is constantly being widened and the search for information is becoming easier. Relations of the CNDST with other similar centers and associations in Italy and abroad are being continually strengthened and already form an international exchange network, ready to satisfy any request whatsoever of subscribers everywhere.

A graphic copy service for the printing of additional copies of any document by means of a Varitype composing machine or a Multilith printing machine, also functions at the Center. This service is exclusively reserved, except occasionally for authorized exceptions, for the needs of the Center itself, various offices and services of the CNR, and the institutions dependent on it.

ADVICE AND ASSISTANCE SERVICES

The Center does full translations from and into the principal languages—French, English, German, and Spanish—of books, articles, papers, essays, summary accounts, documents, correspondence, reports, etc., relative to scientific and technical subjects.

The Center can supply in the original text printed or photostat copies of patents issued in Italy, notwithstanding the variety of the subjects of the patents: legislative, normative, classificatory, etc. The Center possesses one of the few and most complete collections of national patents existing in Italy. It is kept up to date and is available for consultation at the Center.

The Center lends its advisory and assistance services to every theoretical and practical requirement on the subjects of bibliography, librarianship, and documentation. With its modernized classification systems, particularly the Universal Decimal Classification, it gives

help on all the problems of: cataloging, arranging and conserving bibliographical and general material; the establishment and maintenance of card indexes; the organization and maintenance of general and technical libraries; scientific and technical periodicals; Italian and foreign bibliographical and documentary publications; collections of scientific and technical bibliography, past and present, Italian and foreign; and methods and practices used in documentary services.

THE CNR LIBRARY

The other institute of scientific documentation of the CNR, which more properly functions as a documentation center, is the library. On the whole, it serves a double function. On the one hand, it is a collection of books to meet the private needs of the Council in its primary function as a central source of information for the use of the Documentary Center; on the other hand, it is a type of public library which specializes in the scientific field.

At present it is estimated that the library has about 155,000 publications, including the collections of Italian and foreign periodicals that form its greatest wealth. This also includes the numerous pamphlets that are used for supplying information for the scientific studies of our research workers and which form a collection that is absolutely unique of its type. As stated, a great part of the bibliographical material of the library consists in periodicals, which at present number about 5,000, both Italian and foreign, out of and in current publication.

All the material of the library is classified and arranged according to the system of the Library of Congress in Washington and is cataloged according to the system of the Vatican Apostolic Library. The library is furnished with three large catalogs: (1) a dictionary

catalog for authors and subjects, cataloged together; (2) a general catalog of the periodicals, with the titles of periodicals in alphabetical order and with notes on their contents; and (3) a systematic catalog which takes the place of the topographical catalog, in so far as the volumes are arranged in the storerooms according to the system of the Library of Congress.

The library is also furnished, for internal use, with other catalogs including an interesting visible Kardex card index for all the periodicals in stock, with indications of the dates of the issues that have reached the library.

ITALIAN AERONAUTICAL ASSOCIATION

This association provides an information service for the fields of technical aeronautics and kindred sciences. It publishes the periodical, *Aerotecnica*, and operates a library of about 400 volumes. The service is concerned with supplying critical news on the most important research and achievements in the field of technical aeronautics.

MINISTRY OF DEFENSE

The *Divisioni Studi* supplies an aerotechnical information service and publishes information in a monthly *Bulletin* which includes hundreds of items abstracted from technical magazines. The items are followed by a very brief summary of the contents and are classified according to an autonomous decimal system. The card index used by the division contains about 5,000 cards and is always increasing.

The division has its own library of about 1,000 volumes, classified according to subject and with a systematic catalog. It can supply photostatic and typewritten copies of information gathered and reviewed at the office.

The *Ufficio Studi* has, since 1950, published a *Bibliographical Bulletin* in

which are listed the periodical publications to be found in the *Ufficio* itself. In a special bibliographical section are, listed and classified by subject, articles and books dealing almost exclusively with military subjects. News is also given of the most important books as they are published and of those with the biggest sales in Rome. Some articles of a military nature are reported in an appendix. The last part of the bulletin is devoted to the activities of the *Ufficio Studi* and brief notes on various undertakings of the division.

FIAT TECHNICAL PROJECTS DIVISION

This association furnishes an information service in the fields of automobile and aeronautical construction. Since 1946 it has published information in the *Review of the Technical Press*. This periodical, which is published monthly,

gives extracts from about 150 technical publications, Italian and foreign. The bibliographic details are always followed by a brief summary of the subject matter. Every item of information is classified according to the UDC system. The information published and recorded is arranged in a special card index, according to the decimal classification. There are about 40,000 entries, and the number is constantly increasing.

The association also has its own library of more than 5,000 volumes, arranged in broad classifications according to subject. They are cataloged according to authors and subjects. It supplies bibliographical information relative to its own specialty only to associations belonging to the FIAT group. It can supply typewritten and photostatic copies of information gathered and reviewed in the division.

Aeronautical Documentation in the UNITED STATES

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THE ORGANIZATIONS concerned with aeronautical documentation in the United States may be classified under several headings. They include the aeronautical societies, commercial and industrial aviation interests, civil aeronautical organizations, and, of course, the military aviation activities of the government. By far the greatest influence in aeronautical documentation today stems from the military programs concerned with air research and development sponsored by the federal government. An attempt will be made to indicate the scope of these activities

and describe some of the principal developments designed to improve the preparation, publication, dissemination, and use of aeronautical information.

PRODUCING THE DOCUMENTS

Within the federal government, the principal producers of aeronautical research and development documents are the Air Research and Development Command (ARDC), the National Advisory Committee for Aeronautics (NACA), and the Navy Department's Bureau of Aeronautics. There are, of

course, many other organizations preparing reports having aeronautical value and significance but the above three are specifically charged with responsibility for conducting military research and development work to insure our nautics organizations, and, of course, national superiority in aeronautics.

The activities of these government agencies and their many contractors are directed toward the development of new ideas and increased knowledge that will advance our national aeronautical interests. The principal product resulting from their efforts is the scientific and technical information contained in reports of progress and achievement. This important product is costly, and worth the cost if it is prepared properly and put to effective use.

ARDC is responsible for some five thousand technical reports prepared annually by its twelve centers and their contractors. NACA produces nearly one thousand reports each year as a result of its research activities. The Bureau of Aeronautics adds to the total. Approximately half of that produced is unclassified from a security standpoint. The number of copies published varies in accordance with need and cost factors for each report.

PUBLISHED REPORT SERIES

The two aeronautical report series published by ARDC are *Technical Note* and *Technical Report*. *Technical Note* includes findings of significance that require documentation prior to the completion of ARDC project or contract work. They are prepared and published as necessary and are identified with the ARDC center responsible for the contract or project work being conducted, i.e. *WADC-TN-55-10* indicates the tenth *Technical Note* published by the Wright Air Development Center in 1955. The second ARDC series, *Technical Report*, includes the final reports

prepared upon completion of contracts or projects. *Technical Report* includes references to all previously published material in the *Technical Note* series on a particular project or contract and issues are identified similarly in series designation, i.e. *WADC-TR-55-6*.

NACA publishes four series entitled *NACA Report*, *Technical Note*, *Research Memoranda*, and *Technical Memoranda*. The *NACA Report* provides formal presentations of completed research. *Technical Note* contains interim research information of an unclassified nature. *Technical Memoranda* provides translations of selected foreign research information. *Research Memoranda* includes classified information having limited distribution. The first three NACA series are numbered consecutively, i.e. *Report 1035*, *TN 2056*, *TM 1251*. The *Research Memoranda* series number identifies the responsible laboratory and date of publication.

The Bureau of Aeronautics technical reports are not issued in standardized series and appear under various designations. As in the cases of ARDC and NACA, many of the results of its research and development work are published in technical journals or are presented as papers at scientific meetings.

AVAILABILITY OF AERONAUTICAL DOCUMENTS

Each government agency determines the system best suited to meeting its requirements for initial distribution of the results of its aeronautical research and development. In addition, all three agencies referred to utilize services provided by two major government organizations established for secondary distribution of technical information.

Copies of unclassified reports are forwarded to the Office of Technical Services, Department of Commerce, for

announcement and sale to the general public at a nominal fee. ARDC has supplemented this procedure by providing over-runs of its technical documents to the Office of Technical Services at low cost when copies are printed for initial distribution by ARDC. This greatly reduces the price to the purchaser and has provided for the dissemination of thousands of additional copies to business, industry, educational institutions, and individuals.

NACA supplements its distribution system by making its *NACA Report* series available through the Superintendent of Documents, Government Printing Office, Washington, D. C., on an annual subscription basis.

Within the Department of Defense, the Armed Services Technical Information Agency (ASTIA) provides technical report services to the military departments and their research and development contractors. These services include both classified and unclassified information and are necessarily limited, for reasons of security and economy, to activities performing official work for the Department of Defense.

ASTIA is one of the twelve centers of ARDC but serves all elements of the Army, Navy, and Air Force requiring technical information. Each military department is required to forward copies of its technical reports to ASTIA when published, thereby making them available for use by the Defense Department as a whole. Technical information is not collected from or disseminated to foreign interests by ASTIA.

The holdings of ASTIA include much that is not directly concerned with aeronautics but at the same time probably contain the bulk of the total United States output of aeronautical research and development reports published in recent years. Use of ASTIA by the military services and their contractors is extensive, and although far from be-

ing perfect, ASTIA is a valuable asset to the military research and development program.

ANNOUNCING NEW AERONAUTICAL PUBLICATIONS

There are several ways in which aeronautical documents are announced and publicized in the United States. Some of the more important publications for which announcement services are provided are:

U. S. Government Research Reports is issued monthly by the Office of Technical Services, Department of Commerce. It abstracts unclassified reports resulting from government research, including many of aeronautical interest, that are available to the general public.

Aeronautical Engineering Review is published monthly by the Institute of the Aeronautical Sciences. Beginning January 1956, a new "International Aeronautical Abstracts" insert appears in each issue and includes about one hundred and fifty items selected from American and foreign sources. Support for this project has been provided by ARDC's Air Force Office of Scientific Research and stems from recommendations made by the Documentation Committee of AGARD.

Research Abstracts and Reclassification Notices is issued irregularly by NACA to announce its newly available research reports.

There are, in addition to the above, abstracts and titles appearing in trade and professional journals published in the aeronautical and related fields. The indexing services provided by the Pacific Aeronautical Library and *Engineering Index* also help bring attention to recently published information.

ASTIA publishes a *Title Announcement Bulletin* and prepares abstract cards that are available to qualified

users. Both classified and unclassified documents are included in the ASTIA material and these may be requested by any military office or contractor whose field of interest is consistent with its official duties or responsibilities.

NEW APPROACHES TO HANDLING INFORMATION

The tremendous increase in research and development activities has posed serious problems relating to the control and handling of the technical information resulting from these activities. The new knowledge is published but its value is greatly reduced because it cannot be retrieved efficiently thereafter and applied to the never-ending quest for even greater knowledge. The discoveries of today are always the basis for those of tomorrow, and with the increased pace of aeronautical research and development, new and better techniques of information handling must be developed if we are to reap full benefit from recent advances in science and technology.

During the past few years many attempts have been made to establish machine techniques for speeding up the processes of analyzing, coding, storing, and retrieving information. It is significant that none of these attempts has resulted in a machine system that has gained general acceptance. This leaves us with pretty much what we had twenty-five to thirty years ago.

Part of the difficulty has been a lack of awareness of the problem by those whose job it is to provide information and a rather reluctant attitude toward changing the old familiar techniques for something new. Of equal importance, however, has been the general tendency on the part of those proposing new systems to offer solutions before sufficient thought has been given to certain basic requirements for information handling by machine systems.

These "false starts" have not, however, been unfruitful since they have served to generate greater thought on the problem in the minds of some capable people and have directed attention to the true requirements. There is today less applause for an "information machine" merely because it is a machine. Whistles, bells, and spinning wheels hold little enchantment for those looking for real improvement rather than a mechanical or electrical side show.

There is more realization that the present problem is an intellectual one and stems from such considerations as semantics, syntax, and "machine language." There is less effort being made to convert traditional indexing and classification systems to machine use and more to the development of new approaches which will permit faster programming of questions for multiple searching by machines. We still hear the persistent cries of those who say they have the answer to our problem, but the buyer today is looking carefully before he invests in something that may offer little or no improvement over his already outmoded system.

The present outlook for the development of satisfactory machine techniques is very encouraging. This does not mean we shall have our machine system next year, or even within five years, but it is coming as surely as new cures for old maladies inevitably come. It will be forced upon us by the demands of science and progress, and the solution may be found by those who need information rather than by those who provide it. It is to be hoped that the scientist and librarian can find it possible to blend their talents and work together in meeting the problem. There is evidence to support this combination of effort in recent professional meetings, such as that planned by the AGARD Documentation Committee in Rome in February 1956, in which both scientists and librarians will participate.

ON THE OUTSIDE LOOKING IN

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MANY WILL be as surprised by the title of this paper as I was myself when I suddenly realized that after many years on the inside of a library, I was "on the outside looking in."

There is at Hoffmann-La Roche a splendid scientific library; one wall of the room is plate glass, and as I walk down the corridor, I often look in from the outside and sigh, I must admit rather gratefully, that I am no longer involved in the administration of a library, though I am very much dependent in my present work on its good services. This should put me, as a former player now sitting on the side lines, in the unique position to sound off on many old gripes both at the umpire and at the way the players perform, and this is exactly what I propose to do.

WHAT THE LIBRARIAN EXPECTS FROM MANAGEMENT

We will all admit that the administration of a library (and here I must state parenthetically that all my experience has been in industrial research libraries) has its headaches—a type of headache not curable by aspirin, Bromo Seltzer, or any of the newer drugs. These librarians' headaches are caused by poor circulation—not of blood, but of information—that is, by lack of communication and understanding be-

tween management at the top level and the librarian.

Let us not attempt to fix the blame on the personality of the librarian, though this often is the case. I am happy to note that the official personality of the library profession, as understood by the layman (and we must always remember that top management *may* be a layman), is changing. No longer is the librarian a shy and dusty scholar behind thick lenses, or a female dragon with a heavy key jealously guarding the stacks.

Recent full-page advertisements depict a modish young woman helpfully pointing out to a group of chemists a paragraph in an open book. Possibly the profession itself as well as the Special Libraries Association has been instrumental in altering this concept by changing the title from librarian to information specialist, documentarian, literature chemist, or an equally descriptive term.

But let us not be ashamed of the time-honored name, "librarian." Let us make it include the above descriptions and any others which denote "a handmaiden of the sciences." Management likewise, perhaps after several sad mistakes, is now more informed as to the requirements for the profession. Gone are the days when it was thought any pretty receptionist or clerk could keep books in order on a shelf. Today the ever increasing specifications for the librarian's job, such as scientific training, degrees in library science, and rising salary ranges are witness to this fact.

Paper presented before a meeting of the Pharmaceutical Section, Science - Technology Division, at the SLA 46th Annual Convention, Detroit, Michigan, June 14, 1955.

Areas of poor understanding still exist, however, and these usually are concerned with administrative problems such as work routines, character and number of assisting personnel to complete a job, organizational responsibility, expenditures, purchasing techniques, space required, and last, but not least, the status of the librarian within the organization. All of these may seem minor but can add up to enough frustrations to cause many an efficient librarian to leave the library he has so lovingly founded and developed. Such misunderstandings interfere with the services a librarian would like to give and strike at the satisfactions of working.

Let us consider status, often the chief cause of misunderstanding. The librarian, especially the technical or science librarian, should be classed not only salary-wise but also personnel-wise as a professional and given the same privileges, contracts, and opportunities. I like to think of a science librarian as a scientist-researcher working at a desk with books as tools, just as a chemist is a researcher working at a laboratory bench. Library work, even if divorced from literature research and solely administrative, demands the same creative abilities, continuing and absorbing interest, and loving enthusiasm that the investigator gives his problem.

Is it any wonder that incentive tends to decrease when a librarian and staff in a research institution are made responsible to the maintenance department and are grouped with services such as electrical crews? By this wrong classification, responsibility to and communication with the research group tends to be severed. Direct contact is hindered, time is lost, and opportunity for misunderstanding with the library's main clientele, the research group, is decidedly increased.

A technical library functionally is the first group involved in a research project. The technical librarian, there-

fore, should be responsible to a top-level technical manager such as the research director or assistant director. It is a mistake to make him responsible to the business manager, to a patent chemist, or to any other specialized interests, for if this is the case, both the contents and the services of the library will surely be narrowed by such special interests, and the broader group to be served will be increasingly neglected.

The technical librarian should be as informed on research programs and their results as a research group leader. He should sit in on research conferences. Only in this way can he be kept *au courant* of what fields are being considered for research so that the appropriate material will be ready, classified, and available when the project is actually undertaken. The librarian also can often contribute to such conferences by steering interest away from those projects which he knows from the available literature have already been explored. Being "in the know" makes the librarian's work and searches more intelligent, more selective, apt, pertinent, and more interesting. Just as any job done blindly becomes mechanical, so also library work can easily slip into dull routines and lose the personal creative slant that makes it really a contribution to research. Lacking channels of official knowledge, many a librarian is literally forced to depend on corridor gossip or peeping at the keyhole to keep ahead or in touch with current research projects.

The librarian should have the right of direct communication by telephone, reports, or memos with any person requesting the library's services. Nothing is more frustrating than to be anonymous. Anyone collecting information receives the greatest satisfaction in personally passing it on to the individual requesting it. If the librarian has to act through a third person—often someone not well informed or directly in-

volved—the results of the quest may be garbled and may not serve its original purpose or the information transmitted may be in a rewritten or curtailed form which leaves out the fine point really sought for.

MANAGEMENT INTERFERENCE

Management interference with a librarian's methods in making a search, determining scope, and organizing data—usually such interference is done by a supervisor, supposedly in the interests of saving clerical help—often defeats the purpose of the search and wastes the librarian's costly time. I can recall having to search *Chemical Abstracts* three separate times on one subject, because the patent chemist supervising me had limited the scope outline for the study, not realizing that the correlative subjects, included in the first list of headings to be searched, would yield a valuable and useful by-product that would ultimately become the main objective for gathering the data. Perhaps to discourage such interference librarians should have this quotation from Bashford Dean on their desk: "An elaborate bibliography is the strongest scaffolding upon which any research can be built."

Interference by management as to library routine, i.e., methods of circulating journals, discards, binding, etc., so cripples a library that its services may become ineffective. Library routine procedures are based on certain specialized techniques. A trained librarian should, and will, know the most efficient ways of carrying them out, and management should trust him to do so without fear of company money being wasted. After all, an analytical chemist would not be told by management what method to use in determining nitrogen, so why should a librarian be told how circulation should be routed or charged? Rather he should be permitted to fit the method to the situation according to his best judgment. He should also be

supported in front of other personnel on corrective and training measures which make the method effective.

Having once engaged a competent librarian, management should give him the same confidence and freehand it gives any other administrator in making decisions as to work layout, budgeting, purchasing techniques, and choice of personnel. The head librarian, who is not permitted to exercise his own judgment with respect to these matters, has an added burden of explaining to an uninformed person the special requirements of a library. Personnel departments will often consult the librarian about the desired qualifications for a typist or stenographer in the library but will use the resources and advice of business employment bureaus when engaging assisting library personnel, not appreciating that such personnel must have special training and personality requirements. Special sources for such personnel, such as SLA's Placement Service, do exist.

Purchasing methods of a library must often differ from usual company purchasing techniques. The purchasing department should understand that sending out quotations on rare books before concluding purchases will lose material by delays. The librarian should certainly be allowed to choose or suggest sources for obtaining magazines, books, and binders. Expenditures up to approximately \$200 of the library's annual budget should be at her discretion. Often paper work and time spent in getting an O.K. to obtain a pamphlet costing \$1.50 far exceeds the cost of the pamphlet, not to mention the fact that delay in getting the information in it to the research worker requiring it may mean all the difference between getting a priority date on a patent or not.

LIBRARY BUDGET

Library budgets generally do not include salaries and can best be determined after ten years of operation—

the first year's budget being much too high since it includes foundation and equipping costs. The annual budget allotted a library for purchase of materials should bear some realistic relation to the total annual expenditure of the company for research, but should not be rigid. Again, management would not dream of preventing a chemist from purchasing a certain costly, but necessary, reagent, yet many librarians have been forced to postpone purchase of new books to another year (when the book is hardly new) because the book budget would be exceeded.

Management should insist that no other personnel purchase books, i.e., that no extensive private or office or "branch" libraries be equipped, thus duplicating the library's collection without the librarian's knowledge. The purchasing department should be instructed to refer all book purchases to the librarian. Any books purchased for investigators and others should be nominally considered property of the library. Such books can be available on permanent loan after they first have been received and cataloged by the library.

Acquisition of pertinent material and keeping the library up to date are the trained librarian's obligation, but sorrowfully we must admit that some librarians *have* sinned in the direction of being extravagantly nonselective and of not keeping a special library sufficiently special. Temptation in the form of "Some day this may be useful" stands forever at a librarian's elbow both in purchasing new and in discarding old material. The best remedy to avoid this temptation is a library advisory committee, composed of representatives at the group leader level, from each department served by the library. The librarian can then submit suggested purchase lists to the committee for its opinion or approval. At the other end of the scale is his poor brother who can purchase only upon request and must

helplessly stand by and see, for instance, his special library on organic chemistry turning into a library on mathematics, because the physicists on the staff are the only ones who are library minded enough to request purchases!

Original library space should be determined by management after conferring with the librarian (and space should be in proportion to services requested and the size of the research staff served). The final layout planning is something that management could leave entirely to the librarian, not only because he must live in and with that space more than anyone else, but also because in this too, he is a specialist whose opinions should be deferred to, like that of any other specialist.

WHAT THE LIBRARIAN EXPECTS FROM THE RESEARCHER

Number one on the list of requirements the librarian expects from the researcher desiring service is exactness when making requests. These should be specific, well-defined questions that will permit the librarian to limit the search and present pertinent information. A common complaint of the researcher is "I ask for some information and half the library is piled on my desk." Does the researcher realize that his vagueness or unwillingness to be specific results in generalized or too much information? "Something on toxicity of industrial chemicals" may produce a number of books not containing data on the one organic solvent in which the researcher is interested. Likewise, there are many red-covered books in a library and a request for "that new red-covered book you circulated recently" will leave the librarian stumped!

"An article that appeared a couple of months ago" leads the librarian to look through current literature, an arduous task, only to find the article actually appeared two years ago and could have been quickly located in annual indexes.

And so with wrong, author, wrong magazine, wrong page citations—all often taxing the librarian's patience, time, and ingenuity. Why a scientist who is the soul of neatness and precision in his laboratory research should become so vague when it comes to literature research is an unanswered enigma.

WHAT THE USER EXPECTS FROM THE LIBRARY

The usual subjects of library work and of growing with the interests of the organization will not be discussed here. There are, however, a few points which are sometimes overlooked. Librarians have often been accused of being so in love with their methods and rules and their pretty files that they are inflexible. A realistic approach to these details and keeping the researcher's viewpoint well in mind are great assets. The technical librarian who has put in his stint as a chemist in the laboratory is often more successful in this respect. A subject catalog, without unnecessary analytics and "see alsos", which often only show off the cataloger's comprehensive knowledge if separated from an author catalog, is appreciated by the busy researcher who becomes bogged down by a too complicated alphabetic scheme, and who is subconsciously annoyed by proper names turning up among subject headings in scientific terminology.

Omitting on the catalog card the size of the volume, life dates of the author, and other information, such as appears on LC cards, may be unconventional library practice, but it makes such a catalog card more quickly readable by the user. Many a library rule must be abandoned in an industrial research library in the interests of saving clerical as well as the user's time.

Cutting down Photostats to size and typing the reference and the source on the back, especially on single page portions from an article, so that the Photostat can be used with confidence at a later date is also appreciated.

Marking the page in a volume with a slip and the portion of the page referred to lightly in pencil, are other often neglected timesavers. Notes reminding the researcher in what connection information is being sent him instead of just sending on a pile of journals are also part of "service with a plus."

An investigator is most appreciative, however, when the librarian on his own initiative sends attention notes carrying an abstract of new articles of particular interest to him. The new book sent first to the person whose specialty is covered is also appreciated. Such personalized service requires close familiarity with investigators' interests and it is this service which *sells* investigators on the library.

In library work, as in other work, it is that little bit of extra that marks the quality of a product, and bibliographies are the tangible products of the library. Annotated or abstract bibliographies arranged not merely chronologically or by author, but also by a subject classification, are extremely well received by the researcher. Such a subject breakdown helps him to focus his own data or to study along classified lines.

WHAT MANAGEMENT EXPECTS FROM THE LIBRARY

A patent interference suit that won "hands down" by a showing of previous literature compiled by the library, is one of those fortunate rare occasions when a library really is the star performer and demonstrates in a practical way that it earns its keep.

Management takes for granted the library's services to the research group. However, in addition to being a collector of purely scientific information, the librarian who has a little sideline collecting statistical or biographical data or pictures and files of information on rival plants, competitors' advertising literature, research expenditures of

companies relative to their sales, trends in products or markets, new processes, trade names, and other commercial information, and who circulates clippings from newspapers, or, better yet, sends to executive personnel a weekly bulletin of one sentence condensations of significant commercial news, shows in practical ways that the library has the interests of more than the scientific research group at heart.

The market research department and top management, when called upon to write speeches, can often be drawn in to use the library. Sometimes just having the *Wall Street Journal* on file in a scientific library may bring about a visit from management personnel and give them a firsthand view and contact with the library. As a brief induction course for new personnel, library tours and training in the use of the library's resources or even a pamphlet, containing a description of the library's unique collections and a reading list on the industry and the history of the company, will also show management that the library can be a focal point in the company.

An annual report, giving statistical information on the services of the library such as number of formal bibliographies, searches, and translations made; telephone requests answered; attention notes sent and to whom; number of articles abstracted for the library bulletin; a detailed breakdown of purchases into free material, government and other pamphlets, Photostats ordered; book purchases broken down by subject class whether made on the librarian's initiative or upon other staff requests, will serve to show the librarian himself the direction in which the library is growing and will help him establish a correct budget. It will also indicate which departments or personnel use the library most and which should have a little more personal attention extended them. Such an annual report is invaluable to management

since it gives the best bird's-eye view of how the library functions and of the many direct and indirect services it renders. It should also help form management's plans for additional space or personnel.

It is appropriate, perhaps, to close by repeating here a little list of soul-searching questions, written in 1947 for the predecessor of *Sci-Tech News*, entitled "On Being the Good Librarian."

THE LIBRARIAN AS GOOD HOUSEKEEPER: Is everything shipshape and clean in my library, or do clouds of dust rise whenever someone removes a book from my shelves?

THE LIBRARIAN AS ADMINISTRATOR: Do I help my staff by explaining procedures adequately and do I share my professional, technical, and company knowledge with them so that an *esprit de corps* is built in the library?

THE LIBRARIAN AS EDUCATOR: Has my work today really added to the sum total of someone's fund of knowledge?

THE LIBRARIAN AS RESEARCH CATALYST: Have I spurred on the pursuit of a research problem or an experiment that has come to a stop, by finding the apt reference or giving an alternate method or a new line of approach?

THE LIBRARIAN AS SCIENTIST: Do I have a scientific hobby or field of personal interest and research which I follow, study intensively, and about which I know the latest information, so that I can claim to be a "technical expert"?

THE LIBRARIAN AS LEADER: Do I inspire my staff with interest and enthusiasm to grow in our profession?

THE LIBRARIAN AS A DEMOCRAT: Am I as quick to give service or am I as persistent in chasing down a reference for a laboratory assistant as I am for the research director?

THE LIBRARIAN AS PROFESSIONAL WORKER: Do I belong to my professional organization, attend meetings, and take an active hand in SLA projects?

PITTSBURGH PEREGRINATIONS



Virginia L. Garland

BESIDE the flowing waters, beneath the hill-silhouetted sky, lies the powerful, friendly giant that is Pittsburgh. You may have attended the SLA Convention of 1938 in Pittsburgh or even a decade ago you may have visited this city and found it facing a bleak outlook. Rumblings of change made the old-time Pittsburgher sigh abjectively and say, "They have been talking about that since I was a lad." It took Richard K. Mellon, returning from World War II, to say things will really change. "We'll start with smoke control," he mused, "and then go on to redevelopment." His was no idle, paper dream for today the artery-hardened metropolis is a miracle city facing a brilliant future.

At the tip of the Golden Triangle and confluence of the amber Monongahela and swift Allegheny, where once Indians romped and scalped and where explorers started on flatboats to explore the Ohio, there stands today a thirty-six acre park flanked with Pennsylvania trees and covered with sod as green as that found in old Ireland or bonnie Scotland from whence the early settlers came. There, preserved for posterity, is the Block House, a redoubt of Fort Duquesne, that the ill-fated French had to abandon to the British.

Today a twentieth-century city supreme in steel, Pittsburgh bows her head to no industrial city in the world, for all heavy industries are directly or indirectly associated with her. The "Workshop of the World" or the "Hub of the World's Heavi-

est Industries" were laurels that served as springboards for the current epithet, "City of Tomorrow," attained by Pittsburgh's gleaming stainless steel and aluminum skyscrapers and by her maze of parkways and thruways. These freeways make the \$40,000,000 airport, which is the second largest in the world, just twenty minutes away from the city.

In seven short years, blueprints that seemed fantastic became realities when bulldozers, cranes, and hammers cut and smashed away the old and erected the modernly new. The few buildings that escaped the hammer have had their faces washed or sandblasted. Service reigns as well as beauty for when you walk through Mellon Square Park, there is an oasis of trees, fountains, and waterfalls, and beneath this luxuriant park are six underground parking levels.

Along with this incredible redevelopment story, Pittsburgh has a rich heritage in art and education. Here is held the only international painting exhibit in the world as well as a permanent exhibit. A local symbol is a man of brawn and brain. The city has five institutions of college or university status and these institutions are also redeveloping. The University of Pittsburgh has at present rooms full of drawings and blueprints for buildings, mostly devoted to engineering and public health.

When you come to the city that is noted for its vehicular bridges, you might make use of these bridges and get to yonder hills and dales in your leisure time. Make a trip up to Mount Washington. Cast your eye three hundred feet down and see the waters of the Allegheny and Monongahela unite to form the Ohio. Admire the aerial view of Point Park and the shining Gateway Center Buildings proudly named for General Forbes, Major Washington, and Colonel Boquet. See the network of bridges and roadways weaving in and out, around and over the mills and factories, with Duquesne University standing sentinel on

Editor's Note: Readers interested in the Pittsburgh of eighteen years ago will find another interesting account by Virginia L. Garland in *SPECIAL LIBRARIES*, March 1938, p. 77-78.

the bluff. This view will show you a city built on vision; an old city that has been rejuvenated and a city of newborn youth that is about to create a civic arena and auditorium and residential developments which will merit another trip to Pittsburgh in the next few years.

See the Buhl Planetarium, one of the five such in the country. This "Theatre of the Stars" gives scheduled shows and in the interim offers exhibits and demonstrates workings of many branches of science. About five miles away is the Allegheny Observatory, where the world's beloved John Brashear made many of his astronomical discoveries.

The plants of the United States Steel Corporation and the Jones and Laughlin Steel Corporation will play host to Convention visitors on June 5 and 6. Pittsburgh has long ruled the empire of steel. Resting on the greatest coal deposits in the world, this city and her contiguous counties can stoke America's furnaces for generations. Here is produced in the most modern mills in the world, one-fifth of all the steel made in the United States.

The H. J. Heinz Food Plant, home of the famous "57", will also welcome Convention groups on June 5 and 6. Once two humble citizens, a good man and his wife, supplemented their budget by pickling the lowly cucumber and selling it to their neighbors. From this modest beginning has developed an industry that has growing fields and factories throughout the world busily canning, preserving, and pickling everything from cucumbers to coffee beans.

Now go out to the Civic Center where the Carnegie Museum, Institute, and Library are all under one roof, housing treasures of art, sculpture, science, and literature. In the Center you will find the University of Pittsburgh, a skyscraper school famous for its nationality rooms, and Carnegie Institute of Technology, named for Andrew Carnegie. Drop in at Stephen Foster Memorial, costliest tribute ever erected to a musician, to see the Eli



The Pittsburgh Chamber of Commerce

The Hotel William Penn, where the 47th Annual SLA Convention will be held, overlooks the fountains and greenery of Mellon Square Park. On the hotel's left rises the newly constructed Alcoa Building.

Lilly collection of original Foster manuscripts. Visit the Heinz Memorial Chapel, built in the French Gothic style of the thirteenth century. The stained glass windows, designed by the late Dr. Charles J. Connick, have brought many visitors to see their unmatched beauty of workmanship and outstanding color. Save some time for Mellon Institute, a granite and marble building approximately three hundred feet square with sixty-two one-piece columns, forming a veritable temple of science dedicated to the easing of man's burdens.

Whether you speed along the beautiful Pennsylvania Turnpike or glide into the marble-pillared, fountain-sprayed air terminal, or are lulled by a streamlined train (perhaps lucky enough to come on the Pennsylvania's new "Aero-Train"), you will receive a friendly welcome and see in action the indomitable spirit of Pittsburgh which has made it a "Miracle City", building an intellectual and material empire through opportunity and faith.

VIRGINIA L. GARLAND, *Chairman*
Convention Bulletin Committee

CONFERENCE ON THE PRACTICAL UTILIZATION OF RECORDED KNOWLEDGE — PRESENT AND FUTURE, JANUARY 16-18, 1956

WITH THE HOPE that the meetings would provide a "catalytic effect" on research and cooperation in the area of documentation, Jesse H. Shera, Dean of the School of Library Science, opened the Conference at Western Reserve University, Cleveland, Ohio. During the three day period, prominent personalities from the fields of science, library education, and government presented their analyses of present problems and glimpses of some of the paths which may lead to their solutions. The program consisted of a series of addresses on the first day, followed by two days of panel discussions.

In discussing *The International Utilization of Recorded Knowledge*, Burton Adkinson, Library of Congress, pointed out that the exact magnitude of the problem we are dealing with is unknown. National bibliographies provide some aid in this field, and the development of a standard format and arrangement for them is an important task. Other areas needing exploration are improvement of classification methods, standardization of transliteration codes, and international agreement concerning copyright conventions. Mr. Adkinson also described the role that cultural conditions have played in the development of libraries with regard to documentation.

The Role of a Professional Society, in view of the trend toward specialization, is to provide the specialist with detailed information in his field, a general understanding of important trends, and access to accumulated knowledge. This has been carried out by sponsoring meetings at national and local levels and through publishing technical journals, comprehensive reviews, and abstract bulletins. There is a need for new publishing methods and for mechanized searching facilities. Chester M. Lewis, Chief Librarian of *The New York Times* and President of SLA, sug-

gested the development of information retrieval centers where a number of organizations would share the use and cost of required equipment and where means of communication, such as facsimile and direct distance dialing, could provide rapid dissemination of information.

In discussing *Men, Information and Now Automation in the Decision-Making Process*, H. R. J. Grosch, AGT Development Department, General Electric Corporation, pointed out that machines for providing information searching and storage facilities are available, but that a serious communication problem exists through the inability to express information (written or spoken) in mathematical concepts or symbols that can be understood by a computing machine. Mr. Grosch suggested that library education in the future might have to "generate a new class of people" with extensive training in electrical engineering and mathematics.

Margaret E. Egan in considering *The Education for the Librarian of the Future*, stated that a primary function of those planning library curricula is to determine if there is a special body of knowledge required by librarians, but not found elsewhere. This requires a planned, systematic approach to the curricula and a shift in the idea of the function of a librarian from the subjective view of librarians to the objective view of society—the users. According to Egan and Shera, this function is "to maximize the social utilization of graphic records of society." Miss Egan is Research Associate, Center for Documentation and Communication Research, Western Reserve University.

The director of this Center, James W. Perry, expressed concern over the attitude that librarianship is a field in which basic research is not done. Such tools as "Operation Research" might develop important



News Bureau, Western Reserve University

Some of the Conference leaders inspect the official program. Left to right: Chester M. Lewis, *New York Times*; Dr. Jesse H. Shera, Dean, School of Library Science and Conference Chairman; James W. Perry, Director, Center for Documentation and Communication Research; Helen M. Focke, Western Reserve University; and James D. Mack, Lehigh University.

borderline areas between librarianship and such fields as logistics in carrying out research in cooperative and centralized information processing.

James D. Mack, Librarian at Lehigh University, illustrated language barriers within a single language and between several languages in presenting *The Role of Language in the Communication of Recorded Information*. The importance of lucidity and stability in language and specificity in the language of science was stressed.

A highlight of the panel discussion of *The Role of Recorded Information in the Decision-Making Process* was Dr. Robert M. Fano's designing of "games" to illustrate library procedures. The "games" translate library methods into mathematical concepts which can be used in computing devices and exemplifies a type of thinking which avoids the expression of its results in words. Dr. Fano is Associate Professor of Electrical Communication at the Massachusetts Institute of Technology.

The case history of a successful development of a centralized indexing and abstracting unit in the petroleum refining industry was presented by H. W. Field,

Atlantic Refining Company, during a panel on *Cooperative Information Processing*.

The liveliest discussion of the conference was *The Program for Education of Librarians and Documentalists of the Future*. Here, again, the need for research was emphasized and re-emphasized. Robert Booth, Massachusetts Institute of Technology, urged that the concept of librarianship be developed around the user lest libraries become "cemeteries of learning" or "stockpiles of used paper." The amount of quantitative data now available on how the public uses the library and its materials is extremely small, Mr. Booth believes. Questions and comments in considering the special librarian and his role and training indicated a necessary breakdown in the communication barrier between the librarian and management.

A banquet, two planned luncheons, and tours of the new I. F. Freiberger Library Building at Western Reserve and the Cleveland Public Library were also included in the conference program.

JAMES B. HAGLIND
Olin Mathieson Library
Niagara Falls, New York

Have You Heard . . .

AGARD Documentation Committee Meets
The Consiglio Nazionale delle Ricerche (National Research Council) in Rome, Italy, will be the scene of an AGARD Documentation Committee Meeting on February 20 to 25. A number of SLA members will be in Europe to participate in the conference and several will be featured speakers. Mrs. Gwendolyn Bedford, Project Big Ben, University of Pennsylvania, will speak on "Review of Current Machine Systems for Handling Information"; Verner W. Clapp, Library of Congress, will talk on "Operational Problems Requiring Documentation Research"; and Ralph R. Shaw, Graduate School of Library Service, Rutgers University, will give an address entitled "Systems Approach to Documentation Research."

ALA Awards

The ALA Board on Awards has urged all library associations and ALA members to submit nominations for the following awards and citations to be made at the 75th Annual ALA Conference in Miami Beach, June 17-23, 1956:

Melvil Dewey Medal: Awarded annually to an individual or a group for recent creative professional achievement, particularly in the fields of library management, library training, cataloging and classification, and the tools and techniques of librarianship; established in 1952 by the Forest Press, Inc.

Letter Librarian Award: Awarded annually to a librarian who, in the line of duty, contributes most to emphasizing the human qualities of service in librarianship; established in 1946 by Mrs. Ada McCormick; consists of \$100 and a special certificate.

Letter Library Award: Awarded annually to a library for distinguished contributions to the development of enlightened public opinion on an issue of current continuing importance; established in 1947 by Mrs. Ada McCormick; \$100 and a special certificate.

Joseph W. Lippincott Award: Given for distinguished service in the profession of librarianship: outstanding participation in the activities of professional library associations, notable published professional writing, or other significant activity on behalf of the profession and its aims; presented by Joseph W. Lippincott since 1937; consists of \$500 and a special certificate.

Nominations for each of the above awards, with a statement of qualifications and reasons of choice, should be sent, no later than April 1, 1956, to the chairman of the ALA Board on Awards, Robert E. Scudder, Free Library of Philadelphia, Logan Square, Philadelphia 3, Pennsylvania.

John Cotton Dana Publicity Awards: Established in 1943, the awards are given by the *Wilson Library Bulletin* in a contest sponsored jointly with the ALA Public Relations Committee, for outstanding library publicity, based on scrapbooks submitted to show a cross-section of the year's publicity in various types of libraries. Every library is eligible. Full information and entry blanks are available from *Wilson Library Bulletin*, 950 University Ave., New York 52, N. Y., or from ALA Headquarters, 50 East Huron St., Chicago 11, Illinois. Deadline for entry blanks is April 1, 1956; completed scrapbooks are due April 15, 1956.

THE EXECUTIVE BOARD AND THE ADVISORY COUNCIL WILL MEET AT THE
HOTEL SCHROEDER IN MILWAUKEE, WISCONSIN, ON MARCH 1-3.

Film Workshop

The Eastern Regional Meeting of the Educational Film Library Association and the January meeting of the New York Film Council were combined in a two day film workshop on January 26-27 which was held in the Carnegie International Center, New York City. Librarians, film producers, educators, representatives of national and state organizations, and other users of 16mm films took part in the panel discussions and demonstrations. Screenings and previews of appropriate 16mm films contributed to the value and meaning of the discussions.

Emily S. Jones, Executive Secretary of EFLA, opened the workshop with a talk on "Sources of Film Information" and the next day gave the results of 1953 and 1956 EFLA surveys of "Best Sellers in 16mm Films." Dorothy Oshlag, Center for Mass Communications, Columbia University, presided over a panel, "Using Films for Discussion"; Mrs. Dorothy Phillips, Queensborough Public Library, headed the round table on "Utilizing Films in the Community"; Rosalind Kossoff of Film Images chairmanned "Case Histories of Film Use"; and Robert Finehout, Associate Films, directed "TV as a Source of Classroom Films." Many of the persons who had a part in the making of *THE INVADER*, a Center for Mass Communications film, participated in the panel demonstration, "Biography of a Film."

ALA Round Table on Library Service Abroad

The Annual Report for 1954-55 of the ALA Round Table on Library Service Abroad announces the appointment of three committees to increase the effectiveness of its program. The chairman of the Exchange of Persons Committee is Elizabeth G. Robb of the Information Center Service of the U. S. Information Agency; Dr. Felix E. Hirsch of New Jersey State Teachers College at

Trenton, is chairman of a Scholarship Committee; and Lawrence J. Kipp of Harvard University Libraries, is chairman of the Editorial and Publicity Committee.

SLA members who attended the annual meeting of the Round Table on Library Service Abroad during the ALA Convention in Philadelphia last year considered its panel discussion stimulating. Foreign librarians on the panel represented libraries in Ceylon, India, Finland, and Mexico. Verner Clapp, moderator, stressed America's growing interest and knowledge of library development abroad. He was well supported by American panel members, Dr. Stephen McCarthy, recently returned from Egypt, and Russell L. Riley of the International Educational Service, U. S. Department of State.

Museum Librarians: Please Note

The editor of the *Dewey Decimal Classification*, now in preparation for its 16th edition, is anxious to receive suggestions on the revision of the 700's (except 770-790). A copy of the preliminary schedules of the 700's will be sent to anyone who is willing to make suggestions. Letters should be addressed to David Judson Haykin, Editor, Dewey Decimal Classification Editorial Office, Library of Congress, Washington 25, D. C.

Contents In Advance

Eugene Garfield, editor of *Contents in Advance*, which reproduces the current contents pages of major library and documentary publications of the world, is considering similar publications in various other fields. Suggestions from interested persons will be welcomed by Mr. Garfield at *Contents in Advance*, Box 7521, Philadelphia, Pa.

Library Organization Article

"How to Organize a Company Library", featured as the cover story of *Management Methods*, January 1956, pointed

out to executives the importance and values of company libraries. In describing how a library should be set up, how much it should cost, how it can save money, and how a library should operate, the author, Myron Chefitz, utilized much of the information and many of the suggestions given by Marjorie O. Baker in "How to Start a Small Technical Library" (SPECIAL LIBRARIES, March 1955). He also mentioned Special Libraries Association and emphasized that "the librarian is the heart of any library."

SLA Members in the News

MRS. MARIE C. GOODMAN, head of the Acquisition Section in the Map Division of the Library of Congress, is the recipient of the first SLA Geography and Map Division Award. The award was based on a number of recent activities: editorship of *Map Collections in the U. S. and Canada* and of the enlarged *Bulletin* of the Geography and Map Division; secretary of the Division; secretary of the Division; chairman of the Washington Group in 1953-54; and numerous contributions to professional journals. Helen Cruger, Mary Murphy, and Alexander Vietor, chairman, served on the Honors Committee.

DR. VERNON D. TATE has resigned as director of libraries at Massachusetts Institute of Technology, as of January 3, 1956. Dr. Tate, who will retain the rank of professor at the Institute, will conduct seminars at various universities in library techniques. On leave of absence for one year, he is at present in Italy where he is conducting a survey of libraries for the Department of State. Dr. Tate came to MIT in 1947 from Washington, D. C., where he was director of photography at the National Archives. A specialist in microphotography, he increased the use of scientific aids in libraries at MIT and was active in establishing a national plan by which

doctoral theses are made available in microfilm form all over the country. Dr. Tate is succeeded by DR. WILLIAM N. LOCKE, head of the department of modern languages. Dr. Locke is co-editor of the quarterly journal, *Mechanical Translation*.

DELPHINE V. HUMPHREY, librarian at McCann-Erickson, Inc., has assumed the broader function of Manager of Library Research since October 1955.

MRS. ROSE Z. SELLERS, chief special services librarian of Brooklyn College, was the guest of the Hawaii Library Association last summer. During her visit, she was interviewed on the Webley Edwards radio program in Waikiki.

In Memoriam

LAURA SHEARER TURNBULL, a member of the Princeton University library staff for twenty-seven years, died December 18, 1955.

Miss Turnbull was a librarian at the Department of State at the time of the founding of the League of Nations and subsequently was associated with the League of Nations' Collections at the Carnegie Endowment for International Peace and the Woodrow Wilson Foundation in New York. She was the author of *Woodrow Wilson—A Selected Bibliography of His Published Writings, Addresses and Public Papers* (1948).

KATHLEEN REEVES, assistant librarian at the Legislative Library of the Province of Ontario, died October 12, 1955. A graduate of Trinity College and of the University of Toronto Library School, Miss Reeves was an active member of SLA's Toronto Chapter and a former chairman of the Membership Committee.

THE DESK SET Stars SHIRLEY BOOTH As A Special Librarian

William Marchant's hit comedy, *The Desk Set*, currently playing in New York City, is unique in being devoted to special librarians and the special library world. Set in the research library of a radio-television network, the play depicts the satisfactions and problems of special library work while highlighting the personal affairs and romances of the library staff. As Bunny Watson, the head librarian, Shirley Booth meets the challenge of automation in her department with humor and intelligence, matching her prodigious knowledge and memory against EMMARAC, an electronic brain which threatens to usurp the functions of the library personnel.

Miss Frances E. Peters, Free Library of Philadelphia, writes enthusiastically: "Interspersed with the triumphs, setbacks, and ultimate success of each member of the cast, are books, filing cases, a lavish Christmas party, and innumerable reference questions which weigh the telephone wires and tax the ingenuity of each of the participants. For the honor of the profession let it be emphatically stated that never once does the staff fail to come through with the proper answer. The fact that there is no substitute for printed materials, human beings, and human brains is gratifyingly demonstrated when the electronic "answer machine" installed in the library fails to function smoothly or to retrieve desired information. All ends on a happy note and the world at large is shown that there is no substitute for a good librarian.

"Although discussion has run rife as to whether or not there is a 'professional' aspect to the play, if it is good

recruiting bait, and the like, the fact remains that at long last the public has had an opportunity to see a library staff in action and has been given a glimpse of the daily activities of library life. True, it is not always an honest picture. There are flaws and some minor inaccuracies. In the main, however, *The Desk Set* is an amusing piece with propaganda value. Definitely, it is recommended for all, librarians and otherwise!"

"The special library in which the entire play takes place", writes Mrs. Margaret H. Fuller, American Iron and Steel Institute, New York, "is an average size company library with all the problems with which we are familiar. The Christmas party may have been a bit exaggerated but the play does present a special library as most of us know one, and Shirley Booth is delightfully entertaining. I am sure you will enjoy *The Desk Set*—I did!"

Shirley Booth and Mary Gildea watch the library Christmas party from the upper stacks.

Vandamm



Editor's Note: Librarians who are unable to see *The Desk Set* on Broadway will be glad to learn that Twentieth Century Fox has purchased the film rights for the play and plans to produce it in motion picture form.

Off The Press . . .

BOOK REVIEWS

A MANUAL FOR THE ADMINISTRATION OF THE FEDERAL DOCUMENTS COLLECTION IN LIBRARIES. Prepared for the ALA Committee on Public Documents by Ellen Jackson. Chicago: American Library Association, 1955. 108 p. \$3.00.

Although prepared primarily for use by depository libraries, this manual presents, with clarity and style, constants common to the handling of United States government publications in any library.

It describes briefly the official depository program and, more at length, types of publications not included in depository distribution (about three-fourths of publications are nondepository) and ways of tracking down and obtaining them, including microcopy availability.

It states the pros and cons of the two opposing systems of organization: (1) the separate collection, described by an organization chart and outline of staff duties; and (2) the distributed collection assimilated into the general collections of the library by subject matter. The chapters on classification, records, and routines provide specifics for each of the two methods, with main emphasis on the separate collection. Problems of documents that require special handling—press releases, processed reports, revisions, cooperative publications, congressional publications—are helpfully handled.

As a manual on *administration*, the volume is the first in its field and gives evidence of wide collaboration. For reference procedures or subject matter of the government documents collection, it provides a list of annotated bibliographies and indexes.

AGNES O. HANSON
Cleveland Public Library

BUSINESS INFORMATION: HOW TO FIND AND USE IT. Marian Manley. New York: Harper, 1955. 265 p. \$5.

Marian Manley has given librarians a new tool to help them find and use use business facts. Her new book, *Business Information*, based on her experience as business librarian of the Newark Public Library during the past thirty years, reveals the impact of the printed word on the business world.

This is a three part guidebook: part one summarizes sources and applications of business information; part two is a subject list of major publications and sources; and part three is a detailed index. Although it covers the over-all aspects of business literature, the volume is not a checklist of sources in any specific business or industry.

This book should be required reading for library school students and beginners in the business library field, for both its philosophy of service and its guides to sources. For experienced librarians it is stimulating reading—a refresher course, a quick indicator of sources in fields of marginal use, and a reminder of the range of materials readily available from public libraries. Above all it challenges us to start now to sell our services and that priceless commodity—business information—and it gives the businessman further proof of how he may profit from library service.

ISABELLA M. FROST
Safeway Stores Library, Oakland, Calif.

SLA Authors

BERTHA USILTON, librarian of the Freer Gallery of Art, Washington, D. C., is co-compiler, with Rutherford Gettens, of *Abstracts of Technical Studies in Art and Archaeology 1943-52*. The volume is published by the Smithsonian Institution and is part of the series, *Freer Gallery of Art Occasional Papers*.

RECENT REFERENCES

Information furnished is not always complete. Omission of a price does not necessarily indicate that the publication is free.

Bibliographies

BIOLOGICAL SCIENCES SERIAL PUBLICATIONS: A World List 1950-1954. Prepared under the sponsorship of The National Science Foundation by The Science Division, Reference Department, Library of Congress. Philadelphia: *Biological Abstracts*, University of Pennsylvania, 3815 Walnut Street, 1955. Paper, 269 p. \$2.

About 3500 titles are grouped under five broad headings: general biology, botany, zoology, science of man, and general science. Except in rare instances where a serial was not available for examination, each title includes the issuing agency, date of first issue, frequency, pertinent bibliographic notes, and contents. Includes an index of titles, societies, and institutions arranged by country of origin and publication.

A HISTORY OF BIBLIOGRAPHIES OF BIBLIOGRAPHIES. Archer Taylor. New Brunswick, N. J.: Scarecrow Press, 1955. 147 p. \$3.50.

A brief historical summary of the development of this form from its earliest beginnings to the present.

THE JOURNALIST'S BOOKSHELF. An Annotated and Selected Bibliography of United States Journalism, 6th ed. Roland E. Wolseley. Chicago: Quill and Scroll Foundation, 111 W. Jackson Blvd., 1955. 212 p. \$5.

Covers nearly 1300 books. Nearly 200 of these are new or revised volumes on journalism published since 1950.

Dictionaries

DICTIONARY OF NEW WORDS. Mary Reifer. Introduction by Eric Partridge. New York: Philosophical Press, 1955. 234 p. \$6.

Attempts to cover all new words of the last few decades. A useful handbook for the philologist and linguist as well as the layman.

GERMAN-ENGLISH AND ENGLISH-GERMAN DICTIONARY FOR THE IRON AND STEEL INDUSTRY. Eduard Koehler, editor. Vienna: Springer-Verlag; New York: Springer Publishing Co., 1955. 342 p. \$6.65.

There are 8500 entries in each of the two sections of the book. They represent the current language of the industry, including terms reflecting the latest technical advances.

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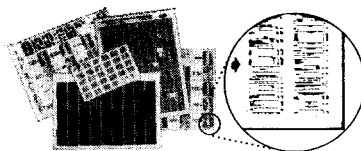
MICROFILM ABSTRACTS AUTHOR INDEX

The Georgia Chapter of SLA will publish in March an author index for volumes I & II of *Microfilm Abstracts*. The work has been compiled by the Chapter and will sell for \$2.00 postpaid. Orders should be addressed to:

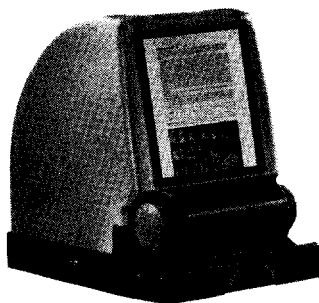
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FEBRUARY 1956



microprint, n. A graphic image on an opaque base, printed in reduced size by photography or a photomechanical process and usually viewed with a suitable enlarging device.*



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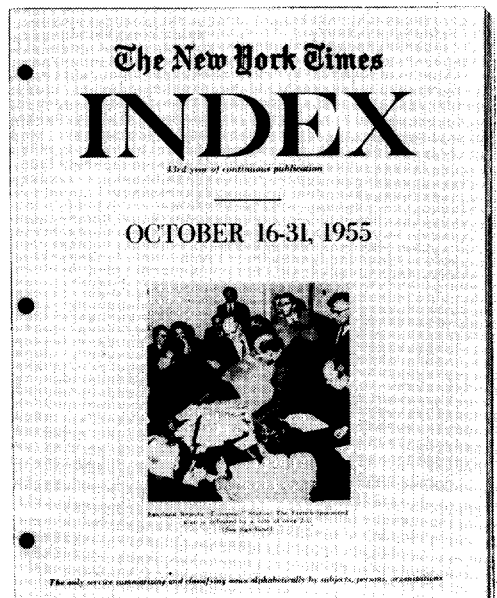
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